

GenCore version 5.1.9
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OM nucleic - nucleic search, using sw model
Run on: January 25, 2007, 12:21:53 ; Search time 320 Seconds
(without alignments)
3.761 Million cell updates/sec
Title: SSE242651
Perfect score: 8637
Sequence: 1 GCCAGCCCCGATTGGGGGC.....GGCCTCTCTGCAGATCAAGT 8637

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 0.5
Searched: 24 seqs, 69674 residues
Total number of hits satisfying chosen parameters: 48
Minimum DB seq length: 0
Maximum DB seq length: 2000000000
Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 1000 summaries
Database : US10789355.seq:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	8591.3	99.5	8639	1 US-10-789-355-1	Sequence 1, Appli
2	8590.3	99.5	8638	1 US-10-789-355-24	Sequence 24, Appl
3	8567.3	99.2	8638	1 US-10-789-355-7	Sequence 7, Appli
4	8566.3	99.2	8638	1 US-10-789-355-25	Sequence 25, Appl
5	8566.3	99.2	8642	1 US-10-789-355-2	Sequence 2, Appli
6	8563.1	99.1	8638	1 US-10-789-355-6	Sequence 6, Appli
7	8552.3	99.0	8648	1 US-10-789-355-5	Sequence 5, Appli
8	8542.6	98.9	8643	1 US-10-789-355-4	Sequence 4, Appli
9	8542.6	98.9	8643	1 US-10-789-355-13	Sequence 13, Appl
10	33.4	0.4	8638	1 US-10-789-355-6	Sequence 6, Appli
11	33.4	0.4	8638	1 US-10-789-355-7	Sequence 7, Appli
12	33.4	0.4	8638	1 US-10-789-355-24	Sequence 24, Appl
13	33.4	0.4	8638	1 US-10-789-355-25	Sequence 25, Appl
14	33.4	0.4	8639	1 US-10-789-355-1	Sequence 1, Appli
15	33.4	0.4	8648	1 US-10-789-355-5	Sequence 5, Appli
16	33	0.4	8642	1 US-10-789-355-2	Sequence 2, Appli
17	31.8	0.4	8643	1 US-10-789-355-4	Sequence 4, Appli
18	31.2	0.4	39	1 US-10-789-355-15	Sequence 15, Appl
19	30	0.3	30	1 US-10-789-355-17	Sequence 17, Appl
20	30	0.3	30	1 US-10-789-355-18	Sequence 18, Appl
21	28	0.3	36	1 US-10-789-355-14	Sequence 14, Appl
22	27	0.3	27	1 US-10-789-355-21	Sequence 21, Appl
23	25.4	0.3	27	1 US-10-789-355-12	Sequence 12, Appl
24	24.4	0.3	26	1 US-10-789-355-19	Sequence 19, Appl
25	23.4	0.3	33	1 US-10-789-355-10	Sequence 10, Appl
26	23	0.3	20	1 US-10-789-355-11	Sequence 11, Appl
27	21.4	0.2	23	1 US-10-789-355-22	Sequence 22, Appl
28	15	0.2	45	1 US-10-789-355-12	Sequence 12, Appl
29	15	0.2	45	1 US-10-789-355-16	Sequence 16, Appl
30	15	0.2	43	1 US-10-789-355-20	Sequence 20, Appl
31	14.3	0.2	63	1 US-10-789-355-9	Sequence 9, Appli
32	14	0.2	27	1 US-10-789-355-21	Sequence 21, Appl
33	13.8	0.2	63	1 US-10-789-355-9	Sequence 9, Appli

ALIGNMENTS

RESULT 1
US-10-789-355-1
; Sequence 1, Application US/10789355
; GENERAL INFORMATION:
; APPLICANT: BOEHRINGER INGELHEIM (CANADA) LTD.
; TITLE OF INVENTION: SELF REPLICATING RNA MOLECULE FROM
; TITLE OF INVENTION: HEPATITIS C VIRUS
; FILE REFERENCE: 13/083
; CURRENT APPLICATION NUMBER: US/10/789,355
; CURRENT FILING DATE: 2004-02-27
; PRIOR APPLICATION NUMBER: US/10/029,907
; PRIOR FILING DATE: 2001-12-21
; PRIOR APPLICATION NUMBER: 60/257,857
; PRIOR FILING DATE: 2000-12-22
; NUMBER OF SEQ ID NOS: 25
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 1
; LENGTH: 8639
; TYPE: DNA
; ORGANISM: HCV
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (1803)....(8408)
US-10-789-355-1

Query Match 99.5%; Score 8591.3; DB 1; Length 8639;
Best Local Similarity 99.7%; Pred. No. 0;
Matches 8624; Conservative 0; Mismatches 2; Indels 23; Gaps 2;

Qy	1	GCCAGCCCCGATTGGGGCGACACTCCACCATAGATCACTCCCTGTGAGGAATCTACTG	60
Db	2	GCCAGCCCCGATTGGGGCGACACTCCACCATAGATCACTCCCTGTGAGGAATCTACTG	61
Qy	61	TCCTTCAGCAGAAACGCTCTAGCCATGCGTTAGTATGATGTCGTGACAGCTTCCAGGAC	120
Db	62	TCCTTCAGCAGAAACGCTCTAGCCATGCGTTAGTATGATGTCGTGACAGCTTCCAGGAC	121
Qy	121	CCCCCTCTCCCGGAGAGCCATAGTGTGTGCGGAAACCGGTGAGTACACCGGAATTCGCGAG	180
Db	122	CCCCCTCTCCCGGAGAGCCATAGTGTGTGCGGAAACCGGTGAGTACACCGGAATTCGCGAG	181
Qy	181	GACGACCGGGTCTCTTTCTTGTGATCAACCCGCTCAATGCTGGAGATTTGGGGGTGCCCCC	240
Db	182	GACGACCGGGTCTCTTTCTTGTGATCAACCCGCTCAATGCTGGAGATTTGGGGGTGCCCCC	241
Qy	241	GCGAGACTGCTAGCGAGTGTGTTGGTCCGGAAGCCTTGTGCTACTGCTCATAGS	300
Db	242	GCGAGACTGCTAGCGAGTGTGTTGGTCCGGAAGCCTTGTGCTACTGCTCATAGS	301
Qy	301	GTGCTTGCAGTGTCCCGGGAGGTTCTCGTAGACCCGTGACCATGAGCAGGAATCTTAAC	360
Db	302	GTGCTTGCAGTGTCCCGGGAGGTTCTCGTAGACCCGTGACCATGAGCAGGAATCTTAAC	361

QY 361 CTCAAGAAACCAAGGCGCGCCATGATGAACAAAGATGGATTGCACGCAAGTTCTC 420
DB |||||
DB 362 CTCAAGAAACCAAGGCGCGCCATGATGAACAAAGATGGATTGCACGCAAGTTCTC 421
QY 421 CGGCGGTTGGGTGGAGAGCTATTGGCTATGACTGGGGCAACAGACAAATCGGCTGCT 480
DB |||||
DB 422 CGGCGGTTGGGTGGAGAGCTATTGGCTATGACTGGGGCAACAGACAAATCGGCTGCT 481
QY 481 CTGATGCGCGCTGTTCCGGCTGTACAGCGAGGGCGCCGGTCTTTTGTCAAGACCG 540
DB |||||
DB 482 CTGATGCGCGCTGTTCCGGCTGTACAGCGAGGGCGCCGGTCTTTTGTCAAGACCG 541
QY 541 ACCTGTCGGTCCCTGAATGAATGTCAGGACGAGGCGGCTATCTGGTGGGCCA 600
DB |||||
DB 542 ACCTGTCGGTCCCTGAATGAATGTCAGGACGAGGCGGCTATCTGGTGGGCCA 601
QY 601 CGACGGCGTTCCTTGGCGAGCTGTGCTCGAGCTGTGTGTCATGAAGCGGGGAAGGACTGGC 660
DB |||||
DB 602 CGACGGCGTTCCTTGGCGAGCTGTGCTCGAGCTGTGTCACTGAAGCGGGGAAGGACTGGC 661
QY 661 TGCATTGGGCGAAGTGC CGGGCAGGATCTCTGTCTCATCTCACTTGTCTCTCCCGAGA 720
DB |||||
DB 662 TGCATTGGGCGAAGTGC CGGGCAGGATCTCTGTCTCATCTCACTTGTCTCTCCCGAGA 721
QY 721 AAGTATCCATCATGGCTGATGCAATGCGCGGCTGCATAGCTTTGATCCGGCTACCTGCC 780
DB |||||
DB 722 AAGTATCCATCATGGCTGATGCAATGCGCGGCTGCATAGCTTTGATCCGGCTACCTGCC 781
QY 781 CATTCGACCAACGAAGCGAAACATCGCATCGAGCGAGCACTCTCGATGGAAGCCGGTC 840
DB |||||
DB 782 CATTCGACCAACGAAGCGAAACATCGCATCGAGCGAGCACTCTCGATGGAAGCCGGTC 841
QY 841 TTGTCGATCAGGATGATCTGACGAAGAGATCAAGGGGCTCGCGCCAGCGCACTGTTCG 900
DB |||||
DB 842 TTGTCGATCAGGATGATCTGACGAAGAGATCAAGGGGCTCGCGCCAGCGCACTGTTCG 901
QY 901 CGAGGCTCAAGGCGCGATGCGCGAGGAGATCTCGTGTGACCACTCGCGGATGCT 960
DB |||||
DB 902 CGAGGCTCAAGGCGCGATGCGCGAGGAGATCTCGTGTGACCACTCGCGGATGCT 961
QY 961 GCTTGGCGAATATCATGGTGGAAATGGCCGCTTTTCTGGATTTCATCGACTGTGCGCGGC 1020
DB |||||
DB 962 GCTTGGCGAATATCATGGTGGAAATGGCCGCTTTTCTGGATTTCATCGACTGTGCGCGGC 1021
QY 1021 TGGGTGTGGCGGACCGCTATCAGACATAGGCTTGGCTACCGGTGATATTCGTAAGAGC 1080
DB |||||
DB 1022 TGGGTGTGGCGGACCGCTATCAGACATAGGCTTGGCTACCGGTGATATTCGTAAGAGC 1081
QY 1081 TTGCGGCGAATGGGCTGACCGCTTCTCGTCTTTACGGTATCGCGCTCCCGATTGCG 1140
DB |||||
DB 1082 TTGCGGCGAATGGGCTGACCGCTTCTCGTCTTTACGGTATCGCGCTCCCGATTGCG 1141
QY 1141 AGCGCATCGGCTTCTATCGGCTTCTTGAAGAGTTCTTCTGAGTT-----TAAA 1188
DB |||||
DB 1142 AGCGCATCGGCTTCTATCGGCTTCTTGAAGAGTTCTTCTGAGTTGCGGCCAGATGTAA 1201
QY 1189 CAGACCAACAGGTTTCCCTCTAGCGGATCAATTCGCGCCCTCTCCCTCCCGCCCGCT 1248
DB |||||
DB 1202 CAGACCAACAGGTTTCCCTCTAGCGGATCAATTCGCG-----CCCGCCCGCT 1250
QY 1249 AACGTTACTGCGCGAAGCGCTTGGATTAAGCGCGGTGTGGTTGTCTATATGTTATT 1308
DB |||||
DB 1251 AACGTTACTGCGCGAAGCGCTTGGATTAAGCGCGGTGTGGTTGTCTATATGTTATT 1310
QY 1309 TCCACCATATTGCGCTCTTTTGGCAATGTAGGGCCCGGAACCTTGGCCCTGTCTCTTG 1368
DB |||||
DB 1311 TCCACCATATTGCGCTCTTTTGGCAATGTAGGGCCCGGAACCTTGGCCCTGTCTCTTG 1370
QY 1369 ACAGCATTTCTAGGGTCTTTCCCTCTCGCCAAAGGAATGCAAGGTCTGTGAATGTC 1428
DB |||||
DB 1371 ACAGCATTTCTAGGGTCTTTCCCTCTCGCCAAAGGAATGCAAGGTCTGTGAATGTC 1430
QY 1429 GTGAAGGAAGCAGTCTCTGGAAGCTTCTTTGAAGACAAACAACTGTGTAGGACCGCTT 1488

DB 1431 GTGAAGGAAGCAGTCTCTCTGGAAGCTTCTTTGAAGACAAACAACTCTGTAGCGACCTT 1490
QY 1489 TGCAAGGCGGAAACCCCTCCCTGCGCACAGGTGCTCTCGGCGAAAGCCACGCTGTA 1548
DB |||||
DB 1491 TGCAAGGCGGAAACCCCTCCCTGCGCACAGGTGCTCTCGGCGAAAGCCACGCTGTA 1550
QY 1549 TAAGATACACCTGCAAAAGCGGCGCAACCCAGTGCACGTTGTGAGTTGGATAGTTGTG 1608
DB |||||
DB 1551 TAAGATACACCTGCAAAAGCGGCGCAACCCAGTGCACGTTGTGAGTTGGATAGTTGTG 1610
QY 1609 GAAAGAGTCAAAATGGCTCTCTCAAGCGTATTCAAAGGGGCTGAAGATGCCAGAAG 1668
DB |||||
DB 1611 GAAAGAGTCAAAATGGCTCTCTCAAGCGTATTCAAAGGGGCTGAAGATGCCAGAAG 1670
QY 1669 GTACCCCATTTGATGGGATCTGATCTGGGGCTCGTGCACATGCTTTACATGTTTGTAG 1728
DB |||||
DB 1671 GTACCCCATTTGATGGGATCTGATCTGGGGCTCGTGCACATGCTTTACATGTTTGTAG 1730
QY 1729 TCGAGGTTAAAAAAGCTTAGGCCCCCGAAACACCGGGACGTTGTTTCTTTGAAAAA 1788
DB |||||
DB 1731 TCGAGGTTAAAAAAGCTTAGGCCCCCGAAACACCGGGACGTTGTTTCTTTGAAAAA 1790
QY 1789 CACGATATATACCATGGACCGGGAGATGGCAGCATCTGCGGAGCGCGGTTTCTGTAAGT 1848
DB |||||
DB 1791 CACGATATATACCATGGACCGGGAGATGGCAGCATCTGCGGAGCGCGGTTTCTGTAAGT 1850
QY 1849 CTGATACCTTTGACCTTGTACCGGCACTATAAGCTGTTCTCGTAGGCTCATATGCTGG 1908
DB |||||
DB 1851 CTGATACCTTTGACCTTGTACCGCACTATAAGCTGTTCTCGTAGGCTCATATGCTGG 1910
QY 1909 TTACAAATATTTTATCACAGGGCCGAGGACACTTTGCAAGTGTGATCCCCCCTCAAC 1968
DB |||||
DB 1911 TTACAAATATTTTATCACAGGGCCGAGGACACTTTGCAAGTGTGATCCCCCCTCAAC 1970
QY 1969 GTTTCGGGGGCGCGGATGCGCTCATCTCTCTCACTGCGGATCCACCCAGAGCTAATC 2028
DB |||||
DB 1971 GTTTCGGGGGCGCGGATGCGCTCATCTCTCTCACTGCGGATCCACCCAGAGCTAATC 2030
QY 2029 TTTTACCATCACAAATCTTGTCTGCGCATATCTGCTGCTCACTCATGTTGCTCAAGCTGCT 2088
DB |||||
DB 2031 TTTTACCATCACAAATCTTGTCTGCGCATATCTGCTGCTCACTCATGTTGCTCAAGCTGCT 2090
QY 2089 ATACCAAGTGCCTGCTTCTGTCGCGCACAGGGCTCATTTCTGTCATGCAATGCTGCTG 2148
DB |||||
DB 2091 ATACCAAGTGCCTGCTTCTGTCGCGCACAGGGCTCATTTCTGTCATGCAATGCTGCTG 2150
QY 2149 CGGAAGTGTCTGGGGGCTCATTTATGTCAAATGGCTCTCATGAAGTTGGCGGCTGACA 2208
DB |||||
DB 2151 CGGAAGTGTCTGGGGGCTCATTTATGTCAAATGGCTCTCATGAAGTTGGCGGCTGACA 2210
QY 2209 GGTACGTACGTTTATGACCACTCAACCCACTGCGGGAGCTGGGCGCACCGGGGCTTACGA 2268
DB |||||
DB 2211 GGTACGTACGTTTATGACCACTCAACCCACTGCGGGAGCTGGGCGCACCGGGGCTTACGA 2270
QY 2269 GACCTTGGGTGGCGAGTTGAGCCCGTCTTCTCTGATATGAGACCAAGGTTATCAC 2328
DB |||||
DB 2271 GACCTTGGGTGGCGAGTTGAGCCCGTCTTCTCTGATATGAGAGCAAGGTTATCAC 2330
QY 2329 TGGGGGCGAGACACCGCGCGGTGCGGACATCATCTTTGGGCTGCGCTCTCGGCCG 2388
DB |||||
DB 2331 TGGGGGCGAGACACCGCGCGGTGCGGACATCATCTTTGGGCTGCGCCGCTCTCGGCCG 2390
QY 2389 AGGGGAGGAGATACATCTGGGACCGGACAGCAGCTTTGAAGGGCAGGGGTGGCGACTC 2448
DB |||||
DB 2391 AGGGGAGGAGATACATCTGGGACCGGACAGCAGCTTTGAAGGGCAGGGGTGGCGACTC 2450
QY 2449 CTCGCGCTTATTAAGGCTTATCTCCCAACAGACGCGAGGCTTCTTGGCTGCAATCATCT 2508
DB |||||
DB 2451 CTCGCGCTTATTAAGGCTTATCTCCCAACAGACGCGAGGCTTCTTGGCTGCAATCATCT 2510
QY 2509 AGCTTCAAGGCGGAGAGGAGCAAGGTCAGGTCGAGGGGAGGTCAGAGTGTCTCCACGCA 2568

Db 2511 AGCTTCAAGCCGCGGACAGAAACCAAGTTCGAGGGGAGGTCCAAAGTGGTCTCCACCACGCA 2570
Qy
2569 ACACAAATCTTCTCGGGGACCTGGGTCAATGCGGTGTGGTGTGGACTGTCTATCATGTGGCC 2628
Db
2571 ACACAAATCTTCTCGGGGACCTGGGTCAATGCGGTGTGGTGTGGACTGTCTATCATGTGGCC 2630
Qy 2629 GGCTCAAAGACCTTTGCGGCGCCAAAGGGCCCAATCAACCCAAATGTATACCAATGTGGAC 2688
Db 2631 GGCTCAAAGACCTTTGCGGCGCCAAAGGGCCCAATCAACCCAAATGTATACCAATGTGGAC 2690
Qy 2689 CAGGACCTCGTGGCTGGCAAGCGCCCGCGGGCGGTTCCTTTGACACCAATGACCTGC 2748
Db 2691 CAGGACCTCGTGGCTGGCAAGCGCCCGCGGGCGGTTCCTTTGACACCAATGACCTGC 2750
Qy 2749 GGACGCTCGGACCTTTACTTTGGTCAAGGACATCCCGATGTCATTTCCGGTGGCGCGCGG 2808
Db 2751 GGACGCTCGGACCTTTACTTTGGTCAAGGACATCCCGATGTCATTTCCGGTGGCGCGCGG 2810
Qy 2809 GGCGACACGAGGGGAGCCTACTCTCCCGCCAGGCGCGTCTCTACTTTGAAGGGCTCTTCG 2868
Db 2811 GGCGACACGAGGGGAGCCTACTCTCCCGCCAGGCGCGTCTCTACTTTGAAGGGCTCTTCG 2870
Qy 2869 GGCGGTCCTACTGCTGCGGCTCGGGGACGCTGTGGGCACTTTTGGGCTGCGGTGTC 2928
Db 2871 GGCGGTCCTACTGCTGCGGCTCGGGGACGCTGTGGGCACTTTTGGGCTGCGGTGTC 2930
Qy 2929 ACCCGGGGCTGCGAAGCGGTGGACTTTGTATACCGTTCGAGTATATGGAACCACTATG 2988
Db 2931 ACCCGGGGCTGCGAAGCGGTGGACTTTGTATACCGTTCGAGTATATGGAACCACTATG 2990
Qy 2989 CGGTCCCGGCTTTACGGAACAATCGTCCCGTCCCGCGGTACCGGACACAATTCACGGTG 3048
Db 2991 CGGTCCCGGCTTTACGGAACAATCGTCCCGTCCCGCGGTACCGGACACAATTCACGGTG 3050
Qy 3049 GCCCATCTACACGCCCTACTGTGTAGCGGCAAGAGCACTAAGGTGCGCGGTGCGTATGCA 3108
Db 3051 GCCCATCTACACGCCCTACTGTGTAGCGGCAAGAGCACTAAGGTGCGCGGTGCGTATGCA 3110
Qy 3109 GCCCAAGGATTAAGGTGCTTGTCTGAAACCGGTTCGTCGCGGACCCCTAGGTTTCGGG 3168
Db 3111 GCCCAAGGATTAAGGTGCTTGTCTGAAACCGGTTCGTCGCGGACCCCTAGGTTTCGGG 3170
Qy 3169 GCGTATATGCTAAGGCACATGATGATCGACCTTAACATCAGAACCGGGGTAAAGCACATC 3228
Db 3171 GCGTATATGCTAAGGCACATGATGATCGACCTTAACATCAGAACCGGGGTAAAGCACATC 3230
Qy 3229 ACCACGGGTGCCCGCATACGTAATCTCCACCTATGGCAAGTTTCTTGGCGACGGTGGTTC 3288
Db 3231 ACCACGGGTGCCCGCATACGTAATCTCCACCTATGGCAAGTTTCTTGGCGACGGTGGTTC 3290
Qy 3289 TCTGGGGGCGCCTATGACATCAATAATATGATGATGATGATGATGATGATGATGATGATGAT 3348
Db 3291 TCTGGGGGCGCCTATGACATCAATAATATGATGATGATGATGATGATGATGATGATGATGAT 3350
Qy 3349 ATCTGGGCATCGGCACAGTCTGGAACCAAGCGGACCGGTGAGCGGCGCTCTGCTG 3408
Db 3351 ATCTGGGCATCGGCACAGTCTGGAACCAAGCGGACCGGTGAGCGGCGCTCTGCTG 3410
Qy 3409 CTGCGCACCGCTACGCTCGCGGATCGGTCAACCGTGCACATCAACAACTCGAGGAGGTG 3468
Db 3411 CTGCGCACCGCTACGCTCGCGGATCGGTCAACCGTGCACATCAACAACTCGAGGAGGTG 3470
Qy 3469 GCTCTGTCCAGCACTGGAGAAATCCCTTTTATGGCAAGCCATCCCATTCGAGACCATC 3528
Db 3471 GCTCTGTCCAGCACTGGAGAAATCCCTTTTATGGCAAGCCATCCCATTCGAGACCATC 3530
Qy 3529 AAGGGGGGAGGACCTCATTTCTGCAATTCAGAGAAATGATGATGATGATGATGATGATGATGAT 3588
Db 3531 AAGGGGGGAGGACCTCATTTTCTGCCATTCAGAGAAATGATGATGATGATGATGATGATGATGAT 3590
Qy 3589 AAGCTGTCCGGCTCGGACTCAATGCTGTAGCATATTTACCGGGGCTTGTATGATCCGTC 3648
Db 3591 AAGCTGTCCGGCTCGGACTCAATGCTGTAGCATATTTACCGGGGCTTGTATGATCCGTC 3650

Qy 3649 ATACCAACTACGGGAGACGTCAATTTGTCTGTAGCAACGAGCGCTCTAATGACGGCTTTTACC 3708
Db 3651 ATACCAACTACGGGAGACGTCAATTTGTCTGTAGCAACGAGCGCTCTAATGACGGCTTTTACC 3710
Qy 3709 GGCATTTTCGACTCAGTGTATGCACTGCAATATCATGTGTATCCACGACAGTGCATTCAGC 3768
Db 3711 GGCATTTTCGACTCAGTGTATGCACTGCAATATCATGTGTATCCACGACAGTGCATTCAGC 3770
Qy 3769 CTGAGCCGACCTTACCATTTGAGACGACGACCGTGCACAAGACGCGTGTACGCTCG 3828
Db 3771 CTGAGCCGACCTTACCATTTGAGACGACGACCGTGCACAAGACGCGTGTACGCTCG 3830
Qy 3829 CAGCGGAGGACGAGCACTGTTAGGGGACAGGATGGGCAATTTACAGGTTTGTGACTCCAGGA 3888
Db 3831 CAGCGGAGGACGAGCACTGTTAGGGGACAGGATGGGCAATTTACAGGTTTGTGACTCCAGGA 3890
Qy 3889 GAACGGGCTCGGCACTGTTTCGATTTCTCGTTCGTGAGTGTATGACGCGGCTGT 3948
Db 3891 GAACGGGCTCGGCACTGTTTCGATTTCTCGTTCGTGAGTGTATGACGCGGCTGT 3950
Qy 3949 GCTTGTACGAGCTCACGCGCGCGGACCTCAGTTAGTTTGGGCTTACCTAAACACA 4008
Db 3951 GCTTGTACGAGCTCACGCGCGCGGACCTCAGTTAGTTTGGGCTTACCTAAACACA 4010
Qy 4009 CCAGGTTTGGGCTTGGCAGGACCATCTGAGTTCTGGAGAGCTTTTACAGGCTC 4068
Db 4011 CCAGGTTTGGGCTTGGCAGGACCATCTGAGTTCTGGAGAGCTTTTACAGGCTC 4070
Qy 4069 ACCACATAGACGCCATTTCTTGTCCAGACTAAGCAGGACGAGAGCAACTTCCCTAC 4128
Db 4071 ACCACATAGACGCCATTTCTTGTCCAGACTAAGCAGGACGAGAGCAACTTCCCTAC 4130
Qy 4129 CTGTTAGCATACAGGCTACGTTGTGCGCCAGGCTCAGGCTCAGCTCCATCTGCTGGAC 4188
Db 4131 CTGTTAGCATACAGGCTACGTTGTGCGCCAGGCTCAGGCTCAGCTCCATCTGCTGGAC 4190
Qy 4189 CAATGTGGAGTGTCTCATAGGCTAAAGCTCAGCTGCAAGGCGGCAAGCGGCTGCTG 4248
Db 4191 CAATGTGGAGTGTCTCATAGGCTAAAGCTCAGCTGCAAGGCGGCAAGCGGCTGCTG 4250
Qy 4249 TATAGGCTGGAGCGCTTCAAAACGAGTTACTACACACACCCCATCAACCAATACATC 4308
Db 4251 TATAGGCTGGAGCGCTTCAAAACGAGTTACTACACACACCCCATCAACCAATACATC 4310
Qy 4309 ATGCGATGATGCTGCTGACCTCGAGGTCTGACAGCACTGAGTGTGTTGAGGCGGA 4368
Db 4311 ATGCGATGATGCTGCTGACCTCGAGGTCTGACAGCACTGAGTGTGTTGAGGCGGA 4370
Qy 4369 GTCTAGACGCTCTGGCGGCTATTTGCTGCAACAGGAGGCTGCTATTTGGGCGAG 4428
Db 4371 GTCTAGACGCTCTGGCGGCTATTTGCTGCAACAGGAGGCTGCTATTTGGGCGAG 4430
Qy 4429 ATCATCTTGTTCGGAAGCGGCTCATTTCCGACAGGAAAGTCTTTTACCGGAGTTC 4488
Db 4431 ATCATCTTGTTCGGAAGCGGCTCATTTCCGACAGGAAAGTCTTTTACCGGAGTTC 4490
Qy 4489 GATGAGATGGAAGAGTGCCTCACCTCTTATCATCGAACAGGGAATCAGCTCGCC 4548
Db 4491 GATGAGATGGAAGAGTGCCTCACCTCTTATCATCGAACAGGGAATCAGCTCGCC 4550
Qy 4549 GAACAAATTTCAACAGAAAGGCAATCGGTTGTGCAACAGGCAACAGCAAGCGGAGGT 4608
Db 4551 GAACAAATTTCAACAGAAAGGCAATCGGTTGTGCAACAGGCAACAGCAAGCGGAGGT 4610
Qy 4609 GCTGCTCCGCTGGTGGAAATCCAGTGGGACCCCTCGAAGCCTTCTGGCGGAGCATATG 4668
Db 4611 GCTGCTCCGCTGGTGGAAATCCAGTGGGACCCCTCGAAGCCTTCTGGCGGAGCATATG 4670
Qy 4669 TGGAAATTTCAACAGCGGATACAAATTTTATGACGCTTGTCCACTCTGCTGCGGCAACCCC 4728
Db 4671 TGGAAATTTCAACAGCGGATACAAATTTTATGACGCTTGTCCACTCTGCTGCGGCAACCCC 4730

Db 6991 GAAGCCTGTAGCTGACGCCCCACATTCGGCCAGATCTAAATTTGGCTATGGGCGAAAG 6950
Qy 6949 GACGTCCGGAACTTATCCAGCAAGCGGTAAACACATCCGCTCGGTGTGGAAGACTTG 7008
Db 6951 GACGTCCGGAACTTATCCAGCAAGCGGTAAACACATCCGCTCGGTGTGGAAGACTTG 7010
Qy 7009 GTGGAAGACACTGAGACACCAATTTGACACCACTCATGTGCAAAATAATGAGTTTCTGC 7068
Db 7011 CTGGAAGACACTGAGACACCAATTTGACACCACTCATGTGCAAAATAATGAGTTTCTGC 7070
Qy 7069 GTCCAAACAGAGAGGGGGCGCAAGCAGCTGCCCTTATCGTATTTCCAGATTGGGG 7128
Db 7071 GTCCAAACAGAGAGGGGGCGCAAGCAGCTGCCCTTATCGTATTTCCAGATTGGGG 7130
Qy 7129 GTTCGTGTGTGCGAGAAATAGCCCTTTTACGATGTGTCTCCACCTCCCTCAGGCGGTG 7188
Db 7131 GTTCGTGTGTGCGAGAAATAGCCCTTTTACGATGTGTCTCCACCTCCCTCAGGCGGTG 7190
Qy 7189 ATGGGCTCTTTCATACGGAATCCAAATCTCTCTCGACAGCGGGTCGAGTTCTCTGCTGAAT 7248
Db 7191 ATGGGCTCTTTCATACGGAATCCAAATCTCTCTCGACAGCGGGTCGAGTTCTCTGCTGAAT 7250
Qy 7249 GCCTGGAAGCGGAAGAAATGCCCTTATGGGCTTCGCATATGACACCCGCTGTTTGAATCA 7308
Db 7251 GCCTGGAAGCGGAAGAAATGCCCTTATGGGCTTCGCATATGACACCCGCTGTTTGAATCA 7310
Qy 7309 ACGTCACTGAGATGACATCCGTTTGGAGGTCATCTACCAATGTGTGACTTGGCC 7368
Db 7311 ACGTCACTGAGATGACATCCGTTTGGAGGTCATCTACCAATGTGTGACTTGGCC 7370
Qy 7369 CCGCAAGCCAGACAGGCGCATAGGTCTCTACAGAGCGGCTTACATCGGGGGCCCCCTG 7428
Db 7371 CCGCAAGCCAGACAGGCGCATAGGTCTCTACAGAGCGGCTTACATCGGGGGCCCCCTG 7430
Qy 7429 ACTAATTTAAAGGCGCAAACTCGGCTATCGCGGTGCGCGCGAGCGGTGTAATCAAG 7488
Db 7431 ACTAATTTAAAGGCGCAAACTCGGCTATCGCGGTGCGCGCGAGCGGTGTAATCAAG 7490
Qy 7489 ACAGCTGCGGTATACCTTACATGTTACTTGAAGCCGCTCGGGCTGTGAGCTGG 7548
Db 7491 ACCAGCTGCGGTATACCTTACATGTTACTTGAAGCCGCTCGGGCTGTGAGCTGG 7550
Qy 7549 AAGCTCCAGACTGACGATGCTGTATGCGGAGACGACCTTGTCTGTTATCTGTGAAGC 7608
Db 7551 AAGCTCCAGACTGACGATGCTGTATGCGGAGACGACCTTGTCTGTTATCTGTGAAGC 7610
Qy 7609 GCGGGACCCCAAGAGGACGAGCGGCTACGGGCTTTCAGGAGGCTATGACTAGATAC 7668
Db 7611 GCGGGACCCCAAGAGGACGAGCGGCTACGGGCTTTCAGGAGGCTATGACTAGATAC 7670
Qy 7669 TCTGCCCCCTTGGGACCCGCCAAACCAAGATACGACTTGGAGTTGATAACATATGC 7728
Db 7671 TCTGCCCCCTTGGGACCCGCCAAACCAAGATACGACTTGGAGTTGATAACATATGC 7730
Qy 7729 TCTCCAAATGTGTCAGTCCGCGAGATGATCGGCAAAAGGTGTACTATCTCACCCGT 7788
Db 7731 TCTCCAAATGTGTCAGTCCGCGAGATGATCGGCAAAAGGTGTACTATCTCACCCGT 7790
Qy 7789 GACCCACACACCCCTTGGCGGGCTGCTGGGAGACAGTACACACTCCAGTCAAT 7848
Db 7791 GACCCACACACCCCTTGGCGGGCTGCTGGGAGACAGTACACACTCCAGTCAAT 7850
Qy 7849 TCTGCTAGGCAACATCATGATATGCGCCCACTTGTGGCAAGGATGATCTCTGATG 7908
Db 7851 TCTGCTAGGCAACATCATGATATGCGCCCACTTGTGGCAAGGATGATCTCTGATG 7910
Qy 7909 ACTCATTTCTTCTCCATCTTCTAGCTCAGGAACAACTTGAAGCCCTAGATTGTGAG 7968
Db 7911 ACTCATTTCTTCTCCATCTTCTAGCTCAGGAACAACTTGAAGCCCTAGATTGTGAG 7970
Qy 7969 ATCTAGGGGCTGTGTACTTCTCATTTGAGCCACTTGACCTACCTCAGATCATTTCAACGACTC 8028
Db 7971 ATCTAGGGGCTGTGTACTTCTCATTTGAGCCACTTGACCTACCTCAGATCATTTCAACGACTC 8030

Qy 8029 CATGSCCTTAGCGCAATTTTCACTCCATAGTTACTCTCCAGGTGAGATCAATAGGGTGGCT 8088
Db 8031 CACGSCCTTAGCGCAATTTTCACTCCATAGTTACTCTCCAGGTGAGATCAATAGGGTGGCT 8090
Qy 8089 TCATGSCCTCAGAAACTTTGGGTACCGCCTTGCAGTCTGGAGACATCGGCGCAGAAGT 8148
Db 8091 TCATGSCCTCAGAAACTTTGGGTACCGCCTTGCAGTCTGGAGACATCGGCGCAGAAGT 8150
Qy 8149 GTCCGCGCTAGCTACTGTCACAGGGGGGGGCTGCCACCTTGTGGCAAGTACCTCTTC 8208
Db 8151 GTCCGCGCTAGCTACTGTCACAGGGGGGGGCTGCCACCTTGTGGCAAGTACCTCTTC 8210
Qy 8209 AACTGGGCGAGTAAGGACCAAGCTCAAACTCACTCCAAATCCCGGCTCGCTCCAGTTGGAT 8268
Db 8211 AACTGGGCGAGTAAGGACCAAGCTCAAACTCACTCCAAATCCCGGCTCGCTCCAGTTGGAT 8270
Qy 8269 TTATCCAGCTGGTTCGTTGCTGTTTACAGCGGGGGAGACATATATACAGCCTGTCTCGT 8328
Db 8271 TTATCCAGCTGGTTCGTTGCTGTTTACAGCGGGGGAGACATATATACAGCCTGTCTCGT 8330
Qy 8329 GCCGACCCCGCTGTTTCATGTGTGCTTACTCTCTCTCTCTCTCTCTCTCTCTCTCTCT 8388
Db 8331 GCCGACCCCGCTGTTTCATGTGTGCTTACTCTCTCTCTCTCTCTCTCTCTCTCTCTCT 8390
Qy 8389 CTACTCCCAACCGATGAACGGGAGCTAAACACCTCCAGGCCAATAGGCCATCTCTGTTT 8448
Db 8391 CTACTCCCAACCGATGAACGGGAGCTAAACACCTCCAGGCCAATAGGCCATCTCTGTTT 8450
Qy 8449 TTTCCCTTT 8508
Db 8451 TTTCCCTTT 8510
Qy 8509 TTTTCTCTTT 8568
Db 8511 TTTTCTCTTT 8570
Qy 8569 TAGCTGTGAAGGTCCTGAGCCCTGACCTGACGAGAGTGTCTGATCTGCGCTCTCTCG 8628
Db 8571 TAGCTGTGAAGGTCCTGAGCCCTGACCTGACGAGAGTGTCTGATCTGCGCTCTCTCG 8630
Qy 8629 AGATCAAGT 8637
Db 8631 AGATCAAGT 8639

RESULT 2

US-10-789-355-24
; Sequence 24. Application US/10789355
; GENERAL INFORMATION:
; APPLICANT: BOEHRINGER INGELHEIM (CANADA) LTD.
; TITLE OF INVENTION: SELF REPLICATING RNA MOLECULE FROM
; TITLE OF INVENTION: HEPATITIS C VIRUS
; FILE REFERENCE: 13/083
; CURRENT APPLICATION NUMBER: US/10/789,355
; CURRENT FILING DATE: 2004-02-27
; PRIOR APPLICATION NUMBER: US/10/029,907
; PRIOR FILING DATE: 2001-12-21
; PRIOR APPLICATION NUMBER: 60/257,857
; PRIOR FILING DATE: 2000-12-22
; NUMBER OF SEQ ID NOS: 25
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 24
; LENGTH: 8638
; TYPE: DNA
; ORGANISM: HCV
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (1802) ... (8407)
US-10-789-355-24

Query Match 99.5%; Score 8590.3; DB 1; Length 8638;
Best Local Similarity 99.7%; Pred. No. 0;

Matches 8623; Conservative 0; Mismatches 2; Indels 23; Gaps 2;			
QY	2	CGAGCCCCCGATTGGGGGACACTCACCATAGATCACTCCCTCTGTGAGAACTACTGT	61
DB	2	CGAGCCCCCGATTGGGGGACACTCACCATAGATCACTCCCTCTGTGAGAACTACTGT	61
QY	62	CTTACGCGAAGAGCGTCTAGCCATGGCGTTAGTATGAGTGTCTGAGCGCTCCAGGACC	121
DB	62	CTTACGCGAAGAGCGTCTAGCCATGGCGTTAGTATGAGTGTCTGAGCGCTCCAGGACC	121
QY	122	CCCCCTCCGGGAGAGCCATAGTGGTCTCGGGAACCGGTGAGTACACCGGAATTGCCAGG	181
DB	122	CCCCCTCCGGGAGAGCCATAGTGGTCTCGGGAACCGGTGAGTACACCGGAATTGCCAGG	181
QY	182	ACGACCGGGTCTCTTCTTGGATCAACCGCTCAATGCTCGAGATTGGGCGTGCCTCCCG	241
DB	182	ACGACCGGGTCTCTTCTTGGATCAACCGCTCAATGCTCGAGATTGGGCGTGCCTCCCG	241
QY	242	CGAGACTGCTAGCCGAGTGTGTGGGTGCGAAAGCCCTTGTGTACTGCTGTATAGGG	301
DB	242	CGAGACTGCTAGCCGAGTGTGTGGGTGCGAAAGCCCTTGTGTACTGCTGTATAGGG	301
QY	302	TGCTTCGAGTGCCTCCGCGAGGTCTGTAGACCGTGCACCATGAGCAGCATCTTAAACC	361
DB	302	TGCTTCGAGTGCCTCCGCGAGGTCTGTAGACCGTGCACCATGAGCAGCATCTTAAACC	361
QY	362	TCAAGAAAACCAAGGGCGCCATGATTGAACCAAGATGGATTCGACGAGTTCTCC	421
DB	362	TCAAGAAAACCAAGGGCGCCATGATTGAACCAAGATGGATTCGACGAGTTCTCC	421
QY	422	GGCGGCTTGGGTGGAGAGGCTATTTCGGCTATGACTGGGCAACAAGACATCGGCTGCTC	481
DB	422	GGCGGCTTGGGTGGAGAGGCTATTTCGGCTATGACTGGGCAACAAGACATCGGCTGCTC	481
QY	482	TGATGCGCGGTTCCGCTGTGACGCGCAGGGCGCCGGTCTTTTGTCAAGACCGA	541
DB	482	TGATGCGCGGTTCCGCTGTGACGCGCAGGGCGCCGGTCTTTTGTCAAGACCGA	541
QY	542	CCTGTCCGTCCTGTAATGAACTGACGAGGAGGCGCGGCTATCGTGGCTGCGCAC	601
DB	542	CCTGTCCGTCCTGTAATGAACTGACGAGGAGGCGCGGCTATCGTGGCTGCGCAC	601
QY	602	GACGCGGTTCTTGGCAGCTGTGCTGACGTTGTCACTGAAGCGGGAAGGACTTGGCT	661
DB	602	GACGCGGTTCTTGGCAGCTGTGCTGACGTTGTCACTGAAGCGGGAAGGACTTGGCT	661
QY	662	GCTATTGGGCGAAGTGCCTGCTGATCTCTGCTCATCTCACCTTGTCTCTCCCGAGAA	721
DB	662	GCTATTGGGCGAAGTGCCTGCTGATCTCTGCTCATCTCACCTTGTCTCTCCCGAGAA	721
QY	722	AGTATCATCATGGCTGATGCAATGCGGCGGCTGTCATACGCTTGTATCGGCTACCTGCC	781
DB	722	AGTATCATCATGGCTGATGCAATGCGGCGGCTGTCATACGCTTGTATCGGCTACCTGCC	781
QY	782	ATTTCGACCAAGCGAATCATGCAATCGAGCGAGCAGCTACTCGGATGGAACCGGCTCT	841
DB	782	ATTTCGACCAAGCGAATCATGCAATCGAGCGAGCAGCTACTCGGATGGAACCGGCTCT	841
QY	842	TGTGATCAGGATGATCTGGAACGAGCATCAGGGGCTCGCGCCAGCGAACTGTTTCG	901
DB	842	TGTGATCAGGATGATCTGGAACGAGCATCAGGGGCTCGCGCCAGCGAACTGTTTCG	901
QY	902	CAGGCTCAAGCGCGCATGTCGCGAGGAGTCTCGTGTGACCATGGCGATGCTG	961
DB	902	CAGGCTCAAGCGCGCATGTCGCGAGGAGTCTCGTGTGACCATGGCGATGCTG	961
QY	962	CTTGGCGAATATCATGCTGGAATATGCGCGTCTTCTGGATTATCATGCTGTGCGCGCT	1021
DB	962	CTTGGCGAATATCATGCTGGAATATGCGCGTCTTCTGGATTATCATGCTGTGCGCGCT	1021
QY	1022	GGGTGTGGCGGACCGCTATCAGGACATAGCGTTGGCTACCGGCTGATTTGCTGAAAGCT	1081
DB	1022	GGGTGTGGCGGACCGCTATCAGGACATAGCGTTGGCTACCGGCTGATTTGCTGAAAGCT	1081

QY	1082	TGCGGCGAATGGGCTGACCGCTTCTCTGCTTTTACGGTATCGCGCTCCCGATTGCA	1141
DB	1082	TGCGGCGAATGGGCTGACCGCTTCTCTGCTTTTACGGTATCGCGCTCCCGATTGCA	1141
QY	1142	GGGATCGCTTCTATCGCTTCTTGAAGAGTCTTCTCTGAGTT-----TAAAC	1189
DB	1142	GGGATCGCTTCTATCGCTTCTTGAAGAGTCTTCTCTGAGTT-----TAAAC	1201
QY	1190	AGACCAACAGGTTTCCCTCTAGCGGATCAATTCGCGCCCTCTCCCTCCCGCCCTA	1249
DB	1202	AGACCAACAGGTTTCCCTCTAGCGGATCAATTCGCG-----CCCGCCCGCTA	1250
QY	1250	ACGTTACTGCGCGAAGCGCTTGAATAAGGCGGCTGTGCTTTGTCTATATGTTATTTT	1309
DB	1251	ACGTTACTGCGCGAAGCGCTTGAATAAGGCGGCTGTGCTTTGTCTATATGTTATTTT	1310
QY	1310	CCACCATATTGCGCTTCTTGGCAATGTAGGGCCCGGAAACCTGGCCCTGTCTTTCTGA	1369
DB	1311	CCACCATATTGCGCTTCTTGGCAATGTAGGGCCCGGAAACCTGGCCCTGTCTTTCTGA	1370
QY	1370	CGAGCATTCCTAGGGTCTTCCCTCTCGCAAGGAATGCAAGGCTCTGTGAAATGCG	1429
DB	1371	CGAGCATTCCTAGGGTCTTCCCTCTCGCAAGGAATGCAAGGCTCTGTGAAATGCG	1430
QY	1430	TGAAGGAAGCAGTTCTCTGGAAGCTTCTTGAAGCAAAACAAAGCTCTGTAGCGACCTTT	1489
DB	1431	TGAAGGAAGCAGTTCTCTGGAAGCTTCTTGAAGCAAAACAAAGCTCTGTAGCGACCTTT	1490
QY	1490	GCAGGACGCGAAACCCCGACAGGTGCTCTGCGGCAAAAGCAACGCTGAT	1549
DB	1491	GCAGGACGCGAAACCCCGACAGGTGCTCTGCGGCAAAAGCAACGCTGAT	1550
QY	1550	AGATACACCTGCAAGCGCGCAACCCCGAGTGCAGTGTGAGTTGAGTAGTGTGG	1609
DB	1551	AGATACACCTGCAAGCGCGCAACCCCGAGTGCAGTGTGAGTTGAGTAGTGTGG	1610
QY	1610	AAAGAGTCAATGCTCTCTCAAGCGTATTCAACAGGGGCTGAAGGATGCCAGAGG	1669
DB	1611	AAAGAGTCAATGCTCTCTCAAGCGTATTCAACAGGGGCTGAAGGATGCCAGAGG	1670
QY	1670	TACCCCATTTGATGGGATCTGATCTGGGGCTCGGTGCACATGCTTTACATGTGTTAGT	1729
DB	1671	TACCCCATTTGATGGGATCTGATCTGGGGCTCGGTGCACATGCTTTACATGTGTTAGT	1730
QY	1730	CGAGGTTAAAGAGCTTAGGCCCCCGAAACCAAGGGGACGTGGTTTCTTTGAAAAAC	1789
DB	1731	CGAGGTTAAAGAGCTTAGGCCCCCGAAACCAAGGGGACGTGGTTTCTTTGAAAAAC	1790
QY	1790	ACGATATACCTGACCGGAGATGCGAGCATCGTGGGAGGCGCGTTCGTAGGTC	1849
DB	1791	ACGATATACCTGACCGGAGATGCGAGCATCGTGGGAGGCGCGTTCGTAGGTC	1850
QY	1850	TGATACTCTTGACCTTGTACCGCATATAAGCTTCTCTCGTAGGCTCATATGTTGTT	1909
DB	1851	TGATACTCTTGACCTTGTACCGCATATAAGCTTCTCTCGTAGGCTCATATGTTGTT	1910
QY	1910	TACAATATTTTATCAACAGGGCCGAGGACACTTGCAGAGTGTGGATCCCGCCCTCAACG	1969
DB	1911	TACAATATTTTATCAACAGGGCCGAGGACACTTGCAGAGTGTGGATCCCGCCCTCAACG	1970
QY	1970	TTGGGGGGGCGCGATGCGCTCATCTCTCTCACTGCGGATCCACCCAGAGCTAATCT	2029
DB	1971	TTGGGGGGGCGCGATGCGCTCATCTCTCTCACTGCGGATCCACCCAGAGCTAATCT	2030
QY	2030	TTACCATCACCAAAATCTTGTCTCGCATACTCATGTGCTCATGTTGTTCCAGGCTGGTA	2089
DB	2031	TTACCATCACCAAAATCTTGTCTCGCATACTCATGTGCTCATGTTGTTCCAGGCTGGTA	2090
QY	2090	TAAACCAAGTGGCTTCTTCTGCGCGCACACGGGCTCAITTCGTGCATGCTGGTGC	2149
DB	2091	TAAACCAAGTGGCTTCTTCTGCGCGCACACGGGCTCAITTCGTGCATGCTGGTGC	2150

QY 2150 GGAAGTGTGCTGGGGTCAATATGTCAAATGGCTCTCATGAAGTGGCCGCACTGACAG 2209
DB 2151 GGAAGTGTGCTGGGGTCAATATGTCAAATGGCTCTCATGAAGTGGCCGCACTGACAG 2210
QY 2210 GTACGTACGTTTATGACCATCTACCCCACTGGGGACTGGGCCCAAGCGGGCCCTACGAG 2269
DB 2211 GTACGTACGTTTATGACCATCTACCCCACTGGGGACTGGGCCCAAGCGGGCCCTACGAG 2270
QY 2270 ACCTTGGCGTGGACAGTGGAGCCGCTGCTCTCTGATATGAGACCAAGGTTATACCT 2329
DB 2271 ACCTTGGCGTGGACAGTGGAGCCGCTGCTCTCTGATATGAGACCAAGGTTATACCT 2330
QY 2330 GGGGGGAGACACCGCGGCGTGTGGGACATCATCTTTGGGCTGCGCGTCTCGGCCGCA 2389
DB 2331 GGGGGGAGACACCGCGGCGTGTGGGACATCATCTTTGGGCTGCGCGTCTCGGCCGCA 2390
QY 2390 GGGGGGAGATACATCTGGGACCGGACAGACAGCTTTGAAGGGCAGGGGTGGGACTCC 2449
DB 2391 GGGGGGAGATACATCTGGGACCGGACAGACAGCTTTGAAGGGCAGGGGTGGGACTCC 2450
QY 2450 TCGCGCTATTACGGCTACTCCCAAGACAGACGGGCGCTACTTGGCTGCATCATCACTA 2509
DB 2451 TCGCGCTATTACGGCTACTCCCAAGACAGACGGGCGCTACTTGGCTGCATCATCACTA 2510
QY 2510 GCCTCAGAGCCGGGACAGGAACAGGTCCAGGGGAGGTCCAAGTGGTCTCAACCGCAA 2569
DB 2511 GCCTCAGAGCCGGGACAGGAACAGGTCCAGGGGAGGTCCAAGTGGTCTCAACCGCAA 2570
QY 2570 CACAATCTTCTGGGACCTGCGTCAATGGCGTGTGGACTGTCTATCATGGTCCG 2629
DB 2571 CACAATCTTCTGGGACCTGCGTCAATGGCGTGTGGACTGTCTATCATGGTCCG 2630
QY 2630 GCTCAAGACCTTGGGCGGCAAGGGCCCAATCACCAGATGTACACCAATGTGGACC 2689
DB 2631 GCTCAAGACCTTGGGCGGCAAGGGCCCAATCACCAGATGTACACCAATGTGGACC 2690
QY 2690 AGGACCTCGTGGCTGCGAAGCGCCCGGGCGGCTCTCTTGACACCATGACACTGCG 2749
DB 2691 AGGACCTCGTGGCTGCGAAGCGCCCGGGCGGCTCTCTTGACACCATGACACTGCG 2750
QY 2750 GCAGCTCGGACCTTTACTTGGTCAAGGCAATGCCGATGTCAATTCGGGTGCGCGCGGG 2809
DB 2751 GCAGCTCGGACCTTTACTTGGTCAAGGCAATGCCGATGTCAATTCGGGTGCGCGCGGG 2810
QY 2810 GCGACGAGGGGAGCGCTACTCTCCCGCAGGCGCGTCTCTTAAGAGGCTCTTTCGG 2869
DB 2811 GCGACGAGGGGAGCGCTACTCTCCCGCAGGCGCGTCTCTTAAGAGGCTCTTTCGG 2870
QY 2870 GCGGTCCACTGCTCTGCCCTCGGGGACGCTGTGGGCACTTTTCGGGCTGCGGTGCA 2929
DB 2871 GCGGTCCACTGCTCTGCCCTCGGGGACGCTGTGGGCACTTTTCGGGCTGCGGTGCA 2930
QY 2930 CCGGAGGGTTCGGAAGGGGTGGAATTTGTACCCGTCGAGTCTATGGAAACCACTATGC 2989
DB 2931 CCGGAGGGTTCGGAAGGGGTGGAATTTGTACCCGTCGAGTCTATGGAAACCACTATGC 2990
QY 2990 GGTCCCGGTCTTACGGAACAATCTGTCCTCCGCGCTACGCGACAGATTCAGAGTGG 3049
DB 2991 GGTCCCGGTCTTACGGAACAATCTGTCCTCCGCGCTACGCGACAGATTCAGAGTGG 3050
QY 3050 CCATCTACAGCCCTACTGTAGCGGCAAGGACTAAGGTGCGGCTGCGGTATGCGAG 3109
DB 3051 CCATCTACAGCCCTACTGTAGCGGCAAGGACTAAGGTGCGGCTGCGGTATGCGAG 3110
QY 3110 CCCAAGGATATAGGTGCTTGTCTCAACCCGTCGCTCGCGCACCTTAGGTTTCGGGG 3169
DB 3111 CCCAAGGATATAGGTGCTTGTCTCAACCCGTCGCTCGCGCACCTTAGGTTTCGGGG 3170
QY 3170 CGTATATGCTAAGGCAATGGTATGACCTTAACATCAGAACCGGGGTAAGGACCATCA 3229
DB 3171 CGTATATGCTAAGGCAATGGTATGACCTTAACATCAGAACCGGGGTAAGGACCATCA 3230
QY 3230 CCACGGGTGCCCCATCAGTACTCCACTATGGCAAGTTTCTTGGCGAGGTGGTGTGCT 3289

DB 3231 CCACGGGTGCCCCATCAGCTACTCCACTATGGCAAGTTTCTTGGCGAGGTGGTGTGCT 3290
QY 3290 CTGGGGGGCCCTATGACATCATATATGTGATGAGTCCACTCAACTGACTCGACCACTA 3349
DB 3291 CTGGGGGGCCCTATGACATCATATATGTGATGAGTGCACCTCAACTGACTCGACCACTA 3350
QY 3350 TCCTGGGCATCGGCACAGTCTCGGACCAAGCGGAGACGGCTGGAGCGGACTCGTCTGTC 3409
DB 3351 TCCTGGGCATCGGCACAGTCTCGGACCAAGCGGAGACGGCTGGAGCGGACTCGTCTGTC 3410
QY 3410 TCGCCACCGCTACCGCTTCGGGATCGGTCAACGGTGCCACATCCAAACATCGAGAGGTGG 3469
DB 3411 TCGCCACCGCTACCGCTTCGGGATCGGTCAACGGTGCCACATCCAAACATCGAGAGGTGG 3470
QY 3470 CTCTGTCCAGCACTGGAGAAATCCCTTTTATGCAAGGCCATCCCATCGGAGACCATCA 3529
DB 3471 CTCTGTCCAGCACTGGAGAAATCCCTTTTATGCAAGGCCATCCCATCGGAGACCATCA 3530
QY 3530 AGGGGGGAGGACCTCATTTTCTGCCATTCACAGAGAAATGTGATGAGCTCGCGCGCA 3589
DB 3531 AGGGGGGAGGACCTCATTTTCTGCCATTCACAGAGAAATGTGATGAGCTCGCGCGCA 3590
QY 3590 AGCTGTCCGGCTCGGACTCAATGCTGTAGCATATTAACGGGCGCTTGAATGATCGTCA 3649
DB 3591 AGCTGTCCGGCTCGGACTCAATGCTGTAGCATATTAACGGGCGCTTGAATGATCGTCA 3650
QY 3650 TACCAACTAGCGGAGAGCTGATTTCTGTAGCAACGGAGCTCTAATGACGGGCTTACCG 3709
DB 3651 TACCAACTAGCGGAGAGCTGATTTCTGTAGCAACGGAGCTCTAATGACGGGCTTACCG 3710
QY 3710 GCGATTTCCGACTCAGTGCATGACCTGCAATATCATGTGTCCACCAGACAGTTCAGCTC 3769
DB 3711 GCGATTTCCGACTCAGTGCATGACCTGCAATATCATGTGTCCACCAGACAGTTCAGCTC 3770
QY 3770 TGAACCCGACCTTCAACATTTAGACGACGACGCTGTCACCAAGACGGGTGTCACTGTCG 3829
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QY 3830 AGCGGAGGAGGACTGTGTAGGGGAGGATGGGCAATTAACGGTTGTGATCTCAGGAG 3889
DB 3831 AGCGGAGGAGGACTGTGTAGGGGAGGATGGGCAATTAACGGTTGTGATCTCAGGAG 3890
QY 3890 AACGGCCCTCGGCACTGTTGATTCCTGCTGTCGAGTGTCTATGACGGGGCTGTG 3949
DB 3891 AACGGCCCTCGGCACTGTTGATTCCTGCTGTCGAGTGTCTATGACGGGGCTGTG 3950
QY 3950 CTTGGTACGAGCTCAGCCCGCGGAGACCTCAGTTAGTTCGGGCTTACCTTAAACACAC 4009
DB 3951 CTTGGTACGAGCTCAGCCCGCGGAGACCTCAGTTAGTTCGGGCTTACCTTAAACACAC 4010
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QY 4130 TGGTAGCATACAGGCTTACGCTGTCGCGGCTCAGGGCTCCAGCTCCATCTGTTGGGACC 4189
DB 4131 TGGTAGCATACAGGCTTACGCTGTCGCGGCTCAGGGCTCCAGCTCCATCTGTTGGGACC 4190
QY 4190 AAATGTGGAAGTGTCTCATACGGCTAAAGCTTACGCTGCACGGGCCCAACGCCCTGTGT 4249
DB 4191 AAATGTGGAAGTGTCTCATACGGCTAAAGCTTACGCTGCACGGGCCCAACGCCCTGTGT 4250
QY 4250 ATAGGCTGGAGCGGTTCAAAAAGAGGTTACTACCAACACCCCATTAACCAAAATACATCA 4309
DB 4251 ATAGGCTGGAGCGGTTCAAAAAGAGGTTACTACCAACACCCCATTAACCAAAATACATCA 4310
QY 4310 TGGCATGCTATGCTGGCTGACCTGGAGTCTGCTCAGGACCTGCGGTGCTGTAGCGGAG 4369

Db 4311 TGGCATGCAATGTCGGCTGACCTGGAGGTGCTCAAGACCACTGGGTCTGGTAGGCGGAG 4370
QY 4370 TCTACAGCTCTGGCGCGGTATTTGCTGACAAACAGCAGCGTGGTCAATTTGGCGGAGGA 4429
Db 4371 TCTACAGCTCTGGCGCGGTATTTGCTGACAAACAGCAGCGTGGTCAATTTGGCGGAGGA 4430
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Db 4551 AACAAATTCAAACAGAGGCAATCGGTTGCTGCAAAACAGCACCAAGCAAGCGGAGGCTG 4610
QY 4610 CTGCTCCGCTGGTGGGAATCCAAGTGGCGGACCTCGAAGCCTTCTGGCGGAAACATATGT 4669
Db 4611 CTGCTCCGCTGGTGGGAATCCAAGTGGCGGACCTCGAAGCCTTCTGGCGGAAACATATGT 4670
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QY 4730 CGATAGCATCACTGATGGCAATTCACAGCCTTATCACAGCGCTATCACAGCGCTCACCAACCAATTA 4789
Db 4731 CGATAGCATCACTGATGGCAATTCACAGCCTTATCACAGCGCTTATCACAGCGCTCACCAACCAATTA 4790
QY 4790 CCTCTCTGTTTAACTCTCGGGGGGATGGGTGGCGGCCCAACTTGTCTCTCCAGCGCTG 4849
Db 4791 CCTCTCTGTTTAACTCTCGGGGGGATGGGTGGCGGCCCAACTTGTCTCTCCAGCGCTG 4850
QY 4850 CTTCTGCTTTCTGAGCGCGCATCGCTCGAGCGGCTGTGGCAGCATAGGCTTTGGGA 4909
Db 4851 CTTCTGCTTTCTGAGCGCGCATCGCTCGAGCGGCTGTGGCAGCATAGGCTTTGGGA 4910
QY 4910 AGGTGCTTGTGGATATTTTGGCAGTTATGGAGCAGGGGTGGCAGCGCGCTCGTGGCCT 4969
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Db 4971 TTAAGGTCATGAGCGCGAGATGCCCTCCACCGAGGACCTGGTTAACTACTCCCTGCTTA 5030
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QY 5090 TGGGCCAGGGAGGGGCTGTGAGTGGATGAACCGGCTGATAGCGTTTCGCTTCGCGGG 5149
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Db 5151 GTAAACCACTCTCCCCACGCACTATGTGCTGAGAGGAGCTGACAGCAGTGTCACTC 5210
QY 5210 AGATCTCTCTAGTCTTACCATCACTCAGCTGTGTAAGAGGCTTCAACAGTGGATCAACG 5269
Db 5211 AGATCTCTCTAGTCTTACCATCACTCAGCTGTGTAAGAGGCTTCAACAGTGGATCAACG 5270
QY 5270 AGGACTGCTCCACGCAATGCTCGGCTCGTGGCTTAAGAGATGTTTGGGATGGATATGCA 5329
Db 5271 AGGACTGCTCCACGCAATGCTCGGCTCGTGGCTTAAGAGATGTTTGGGATGGATATGCA 5330
QY 5330 CGGTGTTGACTGATTTCAAGACCTGGCTCCAGTCCAAAGCTCTCCCGCGGATTCGCGGAG 5389
Db 5331 CGGTGTTGACTGATTTCAAGACCTGGCTCCAGTCCAAAGCTCTCCCGCGGATTCGCGGAG 5390
QY 5390 TCCCTTCTCTCATGTCAGGTGGGTACAGGGAGTCTGGCGGGGCGAGCGGCATATGC 5449
Db 5391 TCCCTTCTCTCATGTCAGGTGGGTACAGGGAGTCTGGCGGGGCGAGCGGCATATGC 5450

QY 5450 AAACCACTGCCATGTGGAGCAAGATCACCGACATGTGAAACCGTTTCCATGAGA 5509
Db 5451 AAACCACTGCCATGTGGAGCAAGATCACCGACATGTGAAACCGTTTCCATGAGA 5510
QY 5510 TCGTGGGCTTAGAGCACTGTAGTAAACAGTGGCAATGGAACAATTTCCCAATTAACCGGTACA 5569
Db 5511 TCGTGGGCTTAGAGCACTGTAGTAAACAGTGGCAATGGAACAATTTCCCAATTAACCGGTACA 5570
QY 5570 CCAGGGCCCTTCACCGCCCTCCCGGGCCAAATTTCTAGGGCGCTGTGGCGGGTGG 5629
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QY 5630 CTGCTGAGGAGTACGTCGAGGTTACGGGGTGGGGATTTCCACTAGCTGAACGGGCATGA 5689
Db 5631 CTGCTGAGGAGTACGTCGAGGTTACGGGGTGGGGATTTCCACTAGCTGAACGGGCATGA 5690
QY 5690 CCACTGACAAAGTAAAGTTCAGGTTCCGGTCCGGCCCCCGAAATTTCTTCAAGAAATGG 5749
Db 5691 CCACTGACAAAGTAAAGTTCAGGTTCCGGTCCGGCCCCCGAAATTTCTTCAAGAAATGG 5750
QY 5750 ATGGGGTGGCGTTGCAAGGTACGCTCCAGCGTGCACAAACCCCTCTCTAAGGAGGAGTCA 5809
Db 5751 ATGGGGTGGCGTTGCAAGGTACGCTCCAGCGTGCACAAACCCCTCTCTAAGGAGGAGTCA 5810
QY 5810 CATTTCTGGTTCGGCTCAATCAATACCTGTTGGGTACAGCTCCCATGCGAGCCGGAAC 5869
Db 5811 CATTTCTGGTTCGGCTCAATCAATACCTGTTGGGTACAGCTCCCATGCGAGCCGGAAC 5870
QY 5870 CGGACGTAGCAGTCTCACTTCCATGCTCACGACCCCTCCACATTAACGGCGGAGACGG 5929
Db 5871 CGGACGTAGCAGTCTCACTTCCATGCTCACGACCCCTCCACATTAACGGCGGAGACGG 5930
QY 5930 CTAAGCGTAGCTGGCCAGGGAGTCTCCCGCTCTCTGGCCAGCTCATCAGTAGCCACG 5989
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QY 5990 TGTCTGCGCTTCTTGAAGCAACATGCACTACCCGCTCATGACTCCCGAGCGTGAAC 6049
Db 5991 TGTCTGCGCTTCTTGAAGCAACATGCACTACCCGCTCATGACTCCCGAGCGTGAAC 6050
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Db 6111 CAGAAATAAGGTAGTAAATTTTGGACTCTTTGAGCCGCTCCAGCGGAGGAGTGA 6170
QY 6170 GGAAGTATCCGTTCCGCGGAGATCTCGGAGGTCCAGGAAATTCCTTCGAGCGATGC 6229
Db 6171 GGAAGTATCCGTTCCGCGGAGATCTCGGAGGTCCAGGAAATTCCTTCGAGCGATGC 6230
QY 6230 CCATATGGGCACCGCGGATTAACACCTTCACTGTTAGAGTCTCTGGAAGGACCCGGAAT 6289
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QY 6290 ACCTCCCTTCCAGTGGTACAACCGGTGTCCATTCGCGCTTCCCAAGGCCCTCCGATACCA 6349
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QY 6350 CTCACGGAGGAGGAGCGGTGTCTGTGCGAATCTACCGGTCTTCTGCTTGGCGG 6409
Db 6351 CTCACGGAGGAGGAGCGGTGTCTGTGCGAATCTACCGGTCTTCTGCTTGGCGG 6410
QY 6410 AGCTCGCACAAAGACCTTCGCGAGCTCCGAGTCTCGGCCCTCGACACGGCGACGCA 6469
Db 6411 AGCTCGCACAAAGACCTTCGCGAGCTCCGAGTCTCGGCCCTCGACACGGCGACGCA 6470
QY 6470 CGGCTCTCTGACACGAGCCCTCCGACGCGGAGCGCGGATCCGACGTTGAGTCTACT 6529
Db 6471 CGGCTCTCTGACACGAGCCCTCCGACGCGGAGCGCGGATCCGACGTTGAGTCTACT 6530

QY	6530	CTCTCATGCCCCCTTTAGGGGAGCGCGGGGATCCCGATCTCAGCGACGGGCTTTGGT	Db	7611	CGGGACCCCAAGAGAGCAGGCGAGCTTACGGGCTTTCACGGAGGCTATGACTAGATACT	7670
Db	6531	CTCTCATGCCCCCTTTAGGGGAGCGCGGGGATCCCGATCTCAGCGACGGGCTTTGGT	QY	7670	CTGCCCCCTTGGGACCCCGCCAAAACAGAAATACGACTTGGAGTTGATAACATCATGCT	7729
QY	6590	CTACCGTTAGCGAGGAGGCTTAGTGAAGACGTCCTGCTGCTCGATGCTTACACATGGA	Db	7671	CTGCCCCCTTGGGACCCCGCCAAAACAGAAATACGACTTGGAGTTGATAACATCATGCT	7730
Db	6591	CTACCGTTAGCGAGGAGGCTTAGTGAAGACGTCCTGCTGCTCGATGCTTACACATGGA	QY	7730	CCTCCAAATGTGTCAAGTCGCGCAGCATCTGGCAAAAGGGTGTACTATCTCACCCTG	7789
QY	6650	CAGCGCCCTTGATCAGCCCATGCGCTGCGAGGAAACCAAGCTGCCCATCAATGCACTGA	Db	7731	CCTCCAAATGTGTCAAGTCGCGCAGCATCTGGCAAAAGGGTGTACTATCTCACCCTG	7790
Db	6651	CAGCGCCCTTGATCAGCCCATGCGCTGCGAGGAAACCAAGCTGCCCATCAATGCACTGA	QY	7790	ACCCACACACCCCTTGGCGGGCTGCTGGGAGACAGCTAGACACACTCCAGTCAAT	7849
QY	6710	GCAACTCTTTGCTCCGTCACCAACCTTGCTATGCTACAACTCTCGCAGCGCAAGCC	Db	7791	ACCCACACACCCCTTGGCGGGCTGCTGGGAGACAGCTAGACACACTCCAGTCAAT	7850
Db	6711	GCAACTCTTTGCTCCGTCACCAACCTTGCTATGCTACAACTCTCGCAGCGCAAGCC	QY	7850	CCTGGCTAGGCAACATCATCATGATGATGCGCCCACTTGTGGGCAAGGATGATCCGTATGA	7909
QY	6770	TGGCGGAGAAAGGTCACTTTGACAGACTGAGGTCTTGGAGAGCACTACCGGGACG	Db	7851	CCTGGCTAGGCAACATCATCATGATGATGCGCCCACTTGTGGGCAAGGATGATCCGTATGA	7910
Db	6771	TGGCGGAGAAAGGTCACTTTGACAGACTGAGGTCTTGGAGAGCACTACCGGGACG	QY	7910	CTCAATTTCTCTCCATCTTCTAGCTCAGGAACAACTTTGAAAAAGCCCTAGATTTCTCAGA	7969
QY	6830	TGCTCAAGGAGATGAAGGCGAAGCGCTCCACAGTTAAGGCTTAACTTCTATCCGTGGAGG	Db	7911	CTCAATTTCTCTCCATCTTCTAGCTCAGGAACAACTTTGAAAAAGCCCTAGATTTCTCAGA	7970
Db	6831	TGCTCAAGGAGATGAAGGCGAAGCGCTCCACAGTTAAGGCTTAACTTCTATCCGTGGAGG	QY	7970	TCTACGGGGCTGTACTTCCATTTGAGCCACTTGACCTACCTCAGATCAATTCAGACTCC	8029
QY	6890	AAGCTGTAACTGACGCCCCCACAATTCGCGCCAGATCTAAATTTGGCTATGGGGCAAGG	Db	7971	TCTACGGGGCTGTACTTCCATTTGAGCCACTTGACCTACCTCAGATCAATTCAGACTCC	8030
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QY	6950	ACGTCCGGAACCTATCCAGCAAGGCGTTAAACACATCCGCTCCGTGTGGAAGACTTGC	Db	8031	ACGGCTTAGGCAATTTTCACTCCATAGTTACTTCCAGGTGAGATCAATAGGGTGGCTT	8090
Db	6951	ACGTCCGGAACCTATCCAGCAAGGCGTTAAACACATCCGCTCCGTGTGGAAGACTTGC	QY	8090	CATGCTCAGGAAACTTTGGGGTACCGCCCTTGCAGTCTGGAGACATCGGGCCAGAAAGT	8149
QY	7010	TGGAAGCACTGAGACCAATTTGACCAACCATCATGCGCAAAATAGAGTTTCTGCG	Db	8150	CATGCTCAGGAAACTTTGGGGTACCGCCCTTGCAGTCTGGAGACATCGGGCCAGAAAGT	8150
Db	7011	TGGAAGCACTGAGACCAATTTGACCAACCATCATGCGCAAAATAGAGTTTCTGCG	QY	8150	TCCGCGCTAGGCTACTGTCTCCAGGGGGGAGGCTGCCACTTTGTGGCAAGTACCTCTTCA	8209
QY	7070	TCCAAACAGAGAGGGGGCGGCAAGCAGCTCGCTTATCGTATTCAGATTTGGGGG	Db	8151	TCCGCGCTAGGCTACTGTCTCCAGGGGGGAGGCTGCCACTTTGTGGCAAGTACCTCTTCA	8210
Db	7071	TCCAAACAGAGAGGGGGCGGCAAGCAGCTCGCTTATCGTATTCAGATTTGGGGG	QY	8210	ACTGGGAGTAAAGCAACAGCTCAACTCACTCCAATCCCGGCTGCCCTCCAGTTGGAT	8269
QY	7130	TTCCGTGTGCGGAGAAATGGCCCTTTACGATGTGCTTCCACCTCCCTCAGGCGGTGA	Db	8211	ACTGGGAGTAAAGCAACAGCTCAACTCACTCCAATCCCGGCTGCCCTCCAGTTGGAT	8270
Db	7131	TTCCGTGTGCGGAGAAATGGCCCTTTACGATGTGCTTCCACCTCCCTCAGGCGGTGA	QY	8270	TATCCAGCTGCTGTGCTGCTTACAGCGGGGAGACATATATACAGCCCTGCTCCTG	8329
QY	7190	TGGGCTCTTCAATGAGATTCGAATCTCTCTGGAGAGGGGTGAGTTCTGCTGTAATG	Db	8271	TATCCAGCTGCTGTGCTGCTTACAGCGGGGAGACATATATACAGCCCTGCTCCTG	8330
Db	7191	TGGGCTCTTCAATGAGATTCGAATCTCTCTGGAGAGGGGTGAGTTCTGCTGTAATG	QY	8330	CCGACCCCTGCTCATGTGTGCTTACTCTTCTTCTGTAGGGGTAGGCATCTATC	8389
QY	7250	CCTGGAAGCGAAGAAATGCCCTATGGGCTTCGCATATGACACCCGCTGTTTGACTCAA	Db	8331	CCGACCCCTGCTCATGTGTGCTTACTCTTCTTCTGTAGGGGTAGGCATCTATC	8390
Db	7251	CCTGGAAGCGAAGAAATGCCCTATGGGCTTCGCATATGACACCCGCTGTTTGACTCAA	QY	8390	TATCCCCAAACCGATGAAACCGGGAGCTAAACACTCCAGGCAATAGGCACTCTGTTTTT	8449
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Db	7311	CGGTCACTGAGATGACATCCGTTGTGAGAGTCAATCTACCAATGTGTGACTTGGCCC	QY	8450	TTCCCTTT	8509
QY	7370	CCGAGCCAGACAGGCCATAAGGTGCTCAGAGCGGCTTTACATCGGGGGCCCCCTGA	Db	8451	TTCCCTTT	8510
Db	7371	CCGAGCCAGACAGGCCATAAGGTGCTCAGAGCGGCTTTACATCGGGGGCCCCCTGA	QY	8510	TTTTCCTTT	8569
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Db	7431	CTAATTTCTAAGGGCAGAACTCGGCTATCGCGGTGCGCGGAGGGGTGTAACGCA	QY	8570	AGCTGTGAAAGGTCCCGTGGAGCGCTTGAATGAGAGAGTGTGATGAGGCTCTCTGCA	8629
QY	7490	CCAGCTGCGGTAAATACCTCACAATGTTACTTGAAGGCGCTGCGGCTGTGAGCTGCGA	Db	8571	AGCTGTGAAAGGTCCCGTGGAGCGCTTGAATGAGAGAGTGTGATGAGGCTCTCTGCA	8630
Db	7491	CCAGCTGCGGTAAATACCTCACAATGTTACTTGAAGGCGCTGCGGCTGTGAGCTGCGA	QY	8630	GATCAAGT 8637	
QY	7550	AGCTCCAGGACTGACAGATGCTGATGCGGAGACGACCTTGTGTTATCTGTGAAAGCG	Db	8631	GATCAAGT 8638	
Db	7551	AGCTCCAGGACTGACAGATGCTGATGCGGAGACGACCTTGTGTTATCTGTGAAAGCG				
QY	7610	CGGGGACCCCAAGGACGAGGCGGCTACGGGCTTTCAGGGGCTATGACTAGATACT				

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US-10-789-355-7
; Sequence 7, Application US/10789355
; GENERAL INFORMATION:
; APPLICANT: BOHRINGER INGELHEIM (CANADA) LTD.
; TITLE OF INVENTION: SELF REPLICATING RNA MOLECULE FROM
; TITLE OF INVENTION: HEPATITIS C VIRUS
; FILE REFERENCE: 13/083
; CURRENT APPLICATION NUMBER: US/10/789,355
; CURRENT FILING DATE: 2004-02-27
; PRIOR APPLICATION NUMBER: US/10/029,907
; PRIOR FILING DATE: 2001-12-21
; PRIOR APPLICATION NUMBER: 60/257,857
; PRIOR FILING DATE: 2000-12-22
; NUMBER OF SEQ ID NOS: 25
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 7
; LENGTH: 8638
; TYPE: DNA
; ORGANISM: HCV
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (1802)...(8407)
US-10-789-355-7

Query Match      99.2%; Score 8567.3; DB 1; Length 8638;
Best Local Similarity 99.5%; Pred. No. 0;
Matches 8609; Conservative 0; Mismatches 17; Indels 23; Gaps 2;

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DB 1 GCACGCCCCGATTTGGGGGCGACACTCCACCATAGATCACTCCCTGTGAGGAACCTACTG 60

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QY 481 CTGATCGCGCGGTTCGCGCTCTCAGCGCAGGGGCGCGGTTCTTTTGTCAAGACCG 540
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1610 GAAAGAGTCAAAAGGCTCTCTCAAGCGTATTCAACAAAGGGGCTGAAGGATGCCAGAA 1669
1669 GTACCCCATTTGATGGGATCTGAGTCTGGGCTCTGCTGCAATGCTTTACATGTTGTTAG 1728
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1790	CACGATAA	TACCATGG	ACCGGGAGAT	GGCAGCATCG	TGGAGCGCG	TTTTCTGTAG	GT	1849
1849	CTGATACT	CTTTGACCT	TGTCA	CCGCACTAT	AGCTGTTC	TCTCGCTAG	GCTCATATG	1908
1850	CTGATACT	CTTTGACCT	TGTCA	CCGCACTAT	AGCTGTTC	TCTCGCTAG	GCTCATATG	1909
1909	TTACAAT	ATATTTAT	CAC	CAGGGCCG	AGGCACAC	TGAGTGTG	ATCCCCCCT	1968
1910	TTACAAT	ATATTTAT	CAC	CAGGGCCG	AGGCACAC	TGAGTGTG	ATCCCCCCT	1969
1969	GTTCGGGG	GGGGCCG	CGATG	CCGTCA	TCTCTC	TACAGTGC	CGGATCC	2028
1970	GTTCGGGG	GGGGCCG	CGATG	CCGTCA	TCTCTC	TACAGTGC	CGGATCC	2029
2029	TTTACCAT	CAACAA	AAATCT	TGTCTG	CCCAT	TA	CTCGGTG	2088
2030	TTTACCAT	CAACAA	AAATCT	TGTCTG	CCCAT	TA	CTCGGTG	2089
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2209	GGTAGT	ACGTTAT	ANGAC	CAATCA	CCCCA	CTG	CGGCACT	2268
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2269	GACCTT	CGGTGG	CAGTT	AGCCGT	CGTCTT	CTCTCAT	ATG	2328
2270	GACCTT	CGGTGG	CAGTT	AGCCGT	CGTCTT	CTCTCAT	ATG	2329
2329	TGGGGG	GCAGAC	CCCGCG	GTGGGG	GCATCA	TCTTGG	CCCTG	2388
2330	TGGGGG	GCAGAC	CCCGCG	GTGGGG	GCATCA	TCTTGG	CCCTG	2389
2389	AGGGG	AGGAGAT	ATAC	TCTGG	ACCGC	AGACAG	CCCTT	2448
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2449	CTCGGC	CTATT	ACGG	CTACT	CCCAA	CAGAC	CGGAG	2508
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RESULT 4

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; Sequence 25, Application US/10789355
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; APPLICANT: BOEHRINGER INGELHEIM (CANADA) LTD.
; TITLE OF INVENTION: SELF REPLICATING RNA MOLECULE FROM
; TITLE OF INVENTION: HEPATITIS C VIRUS
; FILE REFERENCE: 13/083
; CURRENT APPLICATION NUMBER: US/10/789,355
; PRIOR FILING DATE: 2004-02-27
; PRIOR APPLICATION NUMBER: US/10/029,907
; PRIOR FILING DATE: 2001-12-21
; PRIOR APPLICATION NUMBER: 60/257,857
; PRIOR FILING DATE: 2000-12-22
; NUMBER OF SEQ ID NOS: 25
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 25
; LENGTH: 8638
; TYPE: DNA
; ORGANISM: HCV
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (1802)...(8407)
US-10-789-355-25
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Query Match 99.2%; Score 8566.3; DB 1; Length 8638;
Best Local Similarity 99.5%; Pred. No. 0;
Matches 8608; Conservative 0; Mismatches 17; Indels 23; Gaps 2;
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[illegible]

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Db 8631 GATCAAGT 8638
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RESULT 5
US-10-789-355-2
; Sequence 2, Application US/10789355
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; APPLICANT: BOEHRINGER INGELHEIM (CANADA) LTD.
; TITLE OF INVENTION: SELF REPLICATING RNA MOLECULE FROM
; TITLE OF INVENTION: HEPATITIS C VIRUS
; FILE REFERENCE: 13/083
; CURRENT APPLICATION NUMBER: US/10/789,355
; CURRENT FILING DATE: 2004-02-27
; PRIOR APPLICATION NUMBER: US/10/029,907
; PRIOR FILING DATE: 2001-12-21
; PRIOR APPLICATION NUMBER: 60/257,857
; PRIOR FILING DATE: 2000-12-22
; NUMBER OF SEQ ID NOS: 25
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 2
; LENGTH: 8642
; TYPE: DNA
; ORGANISM: HCV
; FEATURE:
; NAME/KEY: CDS
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; LOCATION: (1802)... (8407)
; FEATURE:
; NAME/KEY: variation
; LOCATION: 6268
; OTHER INFORMATION: r = a or g
; FEATURE:
; NAME/KEY: variation
; LOCATION: 4446
; OTHER INFORMATION: r = a or g
US-10-789-355-2

Query Match 99.2%; Score 8566.3; DB 1; Length 8642;
Best Local Similarity 99.6%; Pred. No. 0;
Matches 8614; Conservative 2; Mismatches 9; Indels 27; Gaps 3;

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Db 1311 CCACCATATGCGCCTTTTGGCAATGTAGGCGCCGGAACCTTGGCCCTGTCTTTGA 1370
Qy 1370 CGAGCATTCCTAGGGTCTTTCCCTCTCGCCAAAGGAATGCAAGTCTGTGAAATGTCG 1429
Db 1371 CGAGCATTCCTAGGGTCTTTCCCTCTCGCCAAAGGAATGCAAGTCTGTGAAATGTCG 1430
Qy 1430 TGAAGGAAGAGTTCCTCTGGAAGCTTCTTGAAGACAAACAGCTCTGTAGCACCTTTT 1489
Db 1431 TGAAGGAAGAGTTCCTCTGGAAGCTTCTTGAAGACAAACAGCTCTGTAGCACCTTTT 1490
Qy 1490 GCAGGACGCGAACCCCGACCTGGGACAGGTGCTCTGCGGCCAAAGCCACAGCTGAT 1549
Db 1491 GCAGGACGCGAACCCCGACCTGGGACAGGTGCTCTGCGGCCAAAGCCACAGCTGAT 1550
Qy 1550 AAGATACACTGCAAAAGCGGCAACACCCAGTGCACAGTGTGAGTTGATAGTTGTGG 1609
Db 1551 AAGATACACTGCAAAAGCGGCAACACCCAGTGCACAGTGTGAGTTGATAGTTGTGG 1610
Qy 1610 AAGAGTCAAAATGGCTCTCTAAGCGTATTCAAAGGGGCTGAAGGATGCCCAGAGG 1669
Db 1611 AAGAGTCAAAATGGCTCTCTAAGCGTATTCAAAGGGGCTGAAGGATGCCCAGAGG 1670
Qy 1670 TACCCATTTGATGGATCTGATCTGGGCTCGGTGCACTGCTTTACATGTTGTTAGT 1729
Db 1671 TACCCATTTGATGGATCTGATCTGGGCTCGGTGCACTGCTTTACATGTTGTTAGT 1730
Qy 1730 CGAGGTTAAAGAACGCTTAGGCCCCCGGAACACACGCGGACGTTTCTTTGAAAGAAC 1789
Db 1731 CGAGGTTAAAGAACGCTTAGGCCCCCGGAACACACGCGGACGTTTCTTTGAAAGAAC 1790
Qy 1790 ACGATAATACCATGGAACCGGAGATGGCAGCATCGTGGAGGCGCGGTTTCTGATGGTC 1849
Db 1791 ACGATAATACCATGGAACCGGAGATGGCAGCATCGTGGAGGCGCGGTTTCTGATGGTC 1850
Qy 1850 TGNACTCTTGACCTTGTACCGCCTATAGCTGTTCTCGTAGGCTCATATGTTGTT 1909
Db 1851 TGNACTCTTGACCTTGTACCGCCTATAGCTGTTCTCGTAGGCTCATATGTTGTT 1910
Qy 1910 TACAATATTTTATCACAGGCGGAGGACACCTTGAAGTGTGGATCCCGCCCTCAACG 1969
Db 1911 TACAATATTTTATCACAGGCGGAGGACACCTTGAAGTGTGGATCCCGCCCTCAACG 1970

Qy 1970 TTCGGGGGGCGCGATGCCCTCATCTCTCACGTGGCGGATCCACCAGAGCTAATCT 2029
Db 1971 TTCGGGGGGCGCGATGCCCTCATCTCTCACGTGGCGGATCCACCAGAGCTAATCT 2030
Qy 2030 TTACCATCAACAAATCTTGTCTCGCCATATCTCGGTCCATCATATGTGTCTCCAGGCTGTA 2089
Db 2031 TTACCATCAACAAATCTTGTCTCGCCATATCTCGGTCCATCATATGTGTCTCCAGGCTGTA 2090
Qy 2090 TAACCAAGTGCCTGACTTTCGTGGCGCACAGGCTCATTCGTGATGATGCTGCTGCTG 2149
Db 2091 TAACCAAGTGCCTGACTTTCGTGGCGCACAGGCTCATTCGTGATGATGCTGCTGCTG 2150
Qy 2150 GGAAGTGTCTGGGGCTCATTTATGTCCAAATGGCTCTCATGAAGTTGGCCGCACTGACAG 2209
Db 2151 GGAAGTGTCTGGGGCTCATTTATGTCCAAATGGCTCTCATGAAGTTGGCCGCACTGACAG 2210
Qy 2210 GTACGTACGTTTATGACATCTACCCACTCGCGGACTGGGCCCAACGCGGCTACGAG 2269
Db 2211 GTACGTACGTTTATGACATCTACCCACTCGCGGACTGGGCCCAACGCGGCTACGAG 2270
Qy 2270 ACCTTGGGTGGAGTTGAGCCCGTCTCTCTGATATGGAGACCAAGGTTATCACCT 2329
Db 2271 ACCTTGGGTGGAGTTGAGCCCGTCTCTCTGATATGGAGACCAAGGTTATCACCT 2330
Qy 2330 GGGGGGAGACACCGCGGTGTGGGACATCATCTTGGGCTGCGCTCTCCGCCGCA 2389
Db 2331 GGGGGGAGACACCGCGGTGTGGGACATCATCTTGGGCTGCGCTCTCCGCCGCA 2390
Qy 2390 GGGGGGAGAGATACATCTGGGACCGGACAGCCTTTGAAGGGCAGGGTGGCGACTCC 2449
Db 2391 GGGGGGAGAGATACATCTGGGACCGGACAGCCTTTGAAGGGCAGGGTGGCGACTCC 2450
Qy 2450 TCGGCTTATTAACGCTTACTCCCAACAGACGAGGCTACTTGGCTGATCATCACTA 2509
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Qy 2510 GCCTCAGAGCGCGGACAGGACAGGTCCAGGGGGAGGTCCAGTGTCTCCACCGCAA 2569
Db 2511 GCCTCAGAGCGCGGACAGGACAGGTCCAGGGGGAGGTCCAGTGTCTCCACCGCAA 2570
Qy 2570 CACAATCTTCTGGCGACCTGCTCAATGCGGTGTGTGGACTGTCTATCATGTGCGG 2629
Db 2571 CACAATCTTCTGGCGACCTGCTCAATGCGGTGTGTGGACTGTCTATCATGTGCGG 2630
Qy 2630 GCTCAAAGACCTTTCGCGGCCAAAGGGCCAAATCACCCAAATGTACACCAATGTGAGCC 2689
Db 2631 GCTCAAAGACCTTTCGCGGCCAAAGGGCCAAATCACCCAAATGTACACCAATGTGAGCC 2690
Qy 2690 AGGACCTCGTGGCTGGCAAGCGCCCGCGGGCGCTTCTTGCACCATGCACTGCG 2749
Db 2691 AGGACCTCGTGGCTGGCAAGCGCCCGCGGGCGCTTCTTGCACCATGCACTGCG 2750
Qy 2750 GCAGCTCGGACCTTTACTTGTACAGGATGCGGATGTCAATTCGGGTGCGCGCGGG 2809
Db 2751 GCAGCTCGGACCTTTACTTGTACAGGATGCGGATGTCAATTCGGGTGCGCGCGGG 2810
Qy 2810 GCGACAGAGGGGAGCTTACTCTCTCCCGAGGCCCTCTCTTGAACCATGCTTTCGG 2869
Db 2811 GCGACAGAGGGGAGCTTACTCTCTCCCGAGGCCCTCTCTTGAACCATGCTTTCGG 2870
Qy 2870 GCGGTCACTGCTTGTGCCCCCTCGGGGACAGCTGTGGGCTCTTTCGGGCTGCGGTGCA 2929
Db 2871 GCGGTCACTGCTTGTGCCCCCTCGGGGACAGCTGTGGGCTCTTTCGGGCTGCGGTGCA 2930
Qy 2930 CCGGAGGGGTGGAGCGGTGACTTTGTACCCGCTGAGTCTATGGAACCATATGCT 2989
Db 2931 CCGGAGGGGTGGAGCGGTGACTTTGTACCCGCTGAGTCTATGGAACCATATGCT 2990
Qy 2990 GGTCCCGGTCTTTCAGCGAACCTTGTCCCTCCCGCGGTACCGCAGACATTCCAGGTGG 3049
Db 2991 GGTCCCGGTCTTTCAGCGAACCTTGTCCCTCCCGCGGTACCGCAGACATTCCAGGTGG 3050

3050 QY CCCATCTACACGCCCTTACTGTAGCGGCAAGAGCACTAAGGTGCCGGTGTGGTATGCGAG 3109
3051 Db CCCATCTACACGCCCTTACTGTAGCGGCAAGAGCACTAAGGTGCCGGTGTGGTATGCGAG 3110
3110 QY CCCAAGGATTAAGGTGCTTGTCTGAACCGGTCCGTCCGCCACCTTAGTGTTCGGGG 3169
3111 Db CCCAAGGATTAAGGTGCTTGTCTGAACCGGTCCGTCCGCCACCTTAGTGTTCGGGG 3170
3170 QY CGTATATGTCTAAGGCACATGCTATCGAGCCCTAAACATCAGAACCGGGTAAAGACCATCA 3229
3171 Db CGTATATGTCTAAGGCACATGCTATCGAGCCCTAAACATCAGAACCGGGTAAAGACCATCA 3230
3230 QY CCAACGGGTCCCCCATCACTACTCCACCTATGCGCAAGTTTCTTGCAGCGGTGTGTCT 3289
3231 Db CCAACGGGTCCCCCATCACTACTCCACCTATGCGCAAGTTTCTTGCAGCGGTGTGTCT 3290
3290 QY CTGGGGGGCCCTATGACATCATATATGTATGATGAGTGCACCTCACTGACTCGACCACTA 3349
3291 Db CTGGGGGGCCCTATGACATCATATATGTATGATGAGTGCACCTCACTGACTCGACCACTA 3350
3350 QY TCTTGGGATCGGCAAGTCTTGGCAAGCGGAGACGCTGGAGCGGACTCGTCTGTGC 3409
3351 Db TCTTGGGATCGGCAAGTCTTGGCAAGCGGAGACGCTGGAGCGGACTCGTCTGTGC 3410
3410 QY TCGGCACCGCTACGCTCCGGGATCGGTCAACCGTGCCACATCCAAACATCGAGAGGTGG 3469
3411 Db TCGGCACCGCTACGCTCCGGGATCGGTCAACCGTGCCACATCCAAACATCGAGAGGTGG 3470
3470 QY CTCTGTTCAGCACTGGAGAAATCCCTTTTATGGCAAAAGCCATCCCATCGAGACCATCA 3529
3471 Db CTCTGTTCAGCACTGGAGAAATCCCTTTTATGGCAAAAGCCATCCCATCGAGACCATCA 3530
3530 QY AGGAGGGAGGACCTCATTTTCTGCAATTCGAAGAGAAATGTATGAGTCTGCGCGCA 3589
3531 Db AGGAGGGAGGACCTCATTTTCTGCAATTCGAAGAGAAATGTATGAGTCTGCGCGCA 3590
3590 QY AGCTGTCCGGCTCGGACTCAATGTCTAGTACATATTACCGGGGCTTGATGTATCCGTCA 3649
3591 Db AGCTGTCCGGCTCGGACTCAATGTCTAGTACATATTACCGGGGCTTGATGTATCCGTCA 3650
3650 QY TACCAACTAGCGAGACGCTATTGTCTAGCAACGAGCGCTCTAATGACGGGCTTTACCG 3709
3651 Db TACCAACTAGCGAGACGCTATTGTCTAGCAACGAGCGCTCTAATGACGGGCTTTACCG 3710
3710 QY GCGATTTCCACTCAGTATGCACTGAATACATGTGTACCCAGACAGTGCATTCAGCC 3769
3711 Db GCGATTTCCACTCAGTATGCACTGAATACATGTGTACCCAGACAGTGCATTCAGCC 3770
3770 QY TGGACCCGACCTTCAACATTGAGACGACGACCGTGCCACAAGACGCGGTGTCAAGCTCGC 3829
3771 Db TGGACCCGACCTTCAACATTGAGACGACGACCGTGCCACAAGACGCGGTGTCAAGCTCGC 3830
3830 QY AGCGCGAGCGGACGACTGCTAGGGGAGGATGGGCATTTACAGTTTGTGACTCCAGGAG 3889
3831 Db AGCGCGAGCGGACGACTGCTAGGGGAGGATGGGCATTTACAGTTTGTGACTCCAGGAG 3890
3890 QY AACCGCCCTCGGCACTGTTGATTTCTCGGTTCTGTGCGAGTGTATGACGCGGGCTGTG 3949
3891 Db AACCGCCCTCGGCACTGTTGATTTCTCGGTTCTGTGCGAGTGTATGACGCGGGCTGTG 3950
3950 QY CTTGGTACGAGCTACGCGCGCGGACCTCAGTTAGTTTGGGGGCTTACCTTAAACACAC 4009
3951 Db CTTGGTACGAGCTACGCGCGCGGACCTCAGTTAGTTTGGGGGCTTACCTTAAACACAC 4010
4010 QY CAGGGTTGCGGCTCTCCAGGACCATCTGAGTTCTGGGAGAGCGTCTTTACAGGGCTCA 4069
4011 Db CAGGGTTGCGGCTCTCCAGGACCATCTGAGTTCTGGGAGAGCGTCTTTACAGGGCTCA 4070
4070 QY CCACATAGACGCCCATTTCTGTCTCCAGACTAAGCAGGAGGAGACAACTTCCCTTACC 4129
4071 Db CCACATAGACGCCCATTTCTGTCTCCAGACTAAGCAGGAGGAGACAACTTCCCTTACC 4130
4130 QY TGGTAGCATACAGGCTACGGTGTGCGCCAGGGGCTCAGGCTCCACCTCATCTGTGGGACC 4189

4131 Db TGGTAGCATACAGGCTACGGTGTGCGCCAGGGGCTCAGGCTCCACCTCATCTGTGGGACC 4190
4190 QY AAATGTGGAAGTGTCTCATACGGCTAAAGCTAGCTGACGCGGCAACGCGCCCTGTCTGT 4249
4191 Db AAATGTGGAAGTGTCTCATACGGCTAAAGCTAGCTGACGCGGCAACGCGCCCTGTCTGT 4250
4250 QY ATAGGCTGGGAGCGGTTCAAAAAGAGGTTACTACACACACCCCATAAACCAATACATCA 4309
4251 Db ATAGGCTGGGAGCGGTTCAAAAAGAGGTTACTACACACACCCCATAAACCAATACATCA 4310
4310 QY TGGCATGATGTCTGCTGACCTGAGAGTCTGTCAGAGCACTGGGTGCTGTGTAGCGGAG 4369
4311 Db TGGCATGATGTCTGCTGACCTGAGAGTCTGTCAGAGCACTGGGTGCTGTGTAGCGGAG 4370
4370 QY TCTTAGCAGCTCTGCGCGCTATTTGCTGCAACAGGAGCGTGTCTATTTGGGACAGA 4429
4371 Db TCTTAGCAGCTCTGCGCGCTATTTGCTGCAACAGGAGCGTGTCTATTTGGGACAGA 4430
4430 QY TCACTTTGTCGGAAGCGCGCCATCATTTCCGACAGGAAAGTCTTTTACCGGGAGTTGG 4489
4431 Db TCACTTTGTCGGAAGCGCGCCATCATTTCCGACAGGAAAGTCTTTTACCGGGAGTTGG 4490
4490 QY ATGAGATGGAAGAGTGCCTCAACCTCTTATCATCGAAACAGGAAATGCAAGTCTGCGG 4549
4491 Db ATGAGATGGAAGAGTGCCTCAACCTCTTATCATCGAAACAGGAAATGCAAGTCTGCGG 4550
4550 QY AACAAATCAACAGAGAGGCAATCGGGTGTGCAACAGCCACCAAGCAGCGGAGGCTG 4609
4551 Db AACAAATCAACAGAGAGGCAATCGGGTGTGCAACAGCCACCAAGCAGCGGAGGCTG 4610
4610 QY CTGCTCCGCTGTGGAAATCAAGTGGCGGACCTCTGGAAGCCCTCTGGGCGAAGCATATGT 4669
4611 Db CTGCTCCGCTGTGGAAATCAAGTGGCGGACCTCTGGAAGCCCTCTGGGCGAAGCATATGT 4670
4670 QY GGAATTTTCATCAGCGGATCAATATTTAGCAGGCTTTGTCCACTCTGTCTGTCACACCCCG 4729
4671 Db GGAATTTTCATCAGCGGATCAATATTTAGCAGGCTTTGTCCACTCTGTCTGTCACACCCCG 4730
4730 QY CGATAGCATCACTGATGGCATTTCAAGCTCTATCAAGCGCGCTCAAGCCCAACATATA 4789
4731 Db CGATAGCATCACTGATGGCATTTCAAGCTCTATCAAGCGCGCTCAAGCCCAACATATA 4790
4790 QY CCCTCTGTTTAACTCTCGGGGGATGGGTGGCGGCCCAACTTGTCTCTCCAGCGCTG 4849
4791 Db CCCTCTGTTTAACTCTCGGGGGATGGGTGGCGGCCCAACTTGTCTCTCCAGCGCTG 4850
4850 QY CTTCTGCTTTCTGTAGCGCGGCATCGCTGAGCGGCTGTTGGGACGATAGGCTTTGGGA 4909
4851 Db CTTCTGCTTTCTGTAGCGCGGCATCGCTGAGCGGCTGTTGGGACGATAGGCTTTGGGA 4910
4910 QY AGTGTCTTGTGATATTTTGGCAGGTTATGAGCAGGGGTGGCAGCGCGCTGTGTGGCT 4969
4911 Db AGTGTCTTGTGATATTTTGGCAGGTTATGAGCAGGGGTGGCAGCGCGCTGTGTGGCT 4970
4970 QY TTAAGGTCATGAGCGCGCAGATGCCCTCCACCGAGGACCTGGTTAACTTCTCCCTGCTA 5029
4971 Db TTAAGGTCATGAGCGCGCAGATGCCCTCCACCGAGGACCTGGTTAACTTCTCCCTGCTA 5030
5030 QY TCCTCTCCCTTGGCGCCCTAGTCTGCGGGTGTGTGCGCAGCGATCTGCGCTGGCAGC 5089
5031 Db TCCTCTCCCTTGGCGCCCTAGTCTGCGGGTGTGTGCGCAGCGATCTGCGCTGGCAGC 5090
5090 QY TGGGCCCAAGGGGAGGGGCTGTGAGTGGATGAACCGGCTGATAGCTTTCGCTTCGCGG 5149
5091 Db TGGGCCCAAGGGGAGGGGCTGTGAGTGGATGAACCGGCTGATAGCTTTCGCTTCGCGG 5150
5150 QY GTAAACACGCTCTCCCAACGACATATGTGCTGTGAGAGCGAGCGCTGACGACGCTGTCACTC 5209
5151 Db GTAAACACGCTCTCCCAACGACATATGTGCTGTGAGAGCGAGCGCTGACGACGCTGTCACTC 5210
5210 QY AGATCCCTCTTGTGCTTTACCATCACTCAGCTGTCTGAGAGGCTTCCACAGTCGATCAACG 5269

5211	Db	AGATCCTCTTAGTCTTTACCAATCACTCAGCTGCTGTAAGAGAGGCTTCAACAAGTGAGATCAACG	5270
5270	Qy	AGGACTGCTCCACGCGCATGCTCCGGCTCGTGGCTAAAGAGATGTTTGGGATTTGGGATATGCA	5329
5271	Db	AGGACTGCTCCACGCGCATGCTCCGGCTCGTGGCTAAGAGATGTTTGGGATTTGGGATATGCA	5330
5330	Qy	CGGTGTTGACTGTGATTTCAAGAAGCTTGGCTCCAGTCCAAAGCTCCTGCCGCGATTTGCCGGGAG	5389
5331	Db	CGGTGTTGACTGTGATTTCAAGAAGCTTGGCTCCAGTCCAAAGCTCCTGCCGCGATTTGCCGGGAG	5390
5390	Qy	TCCCTCTTCTCTCATGTCAACGTCGGGTACAGGGGAGTCTGGCGGGGCGAGCGGCATCATGC	5449
5391	Db	TCCCTCTTCTCTCATGTCAACGTCGGGTACAGGGGAGTCTGGCGGGGCGAGCGGCATCATGC	5450
5450	Qy	AAACCACTGCGCCCATGTGGAGCACAGATCACCGGACATGTGAAAAACGGTTTCCATCAGGA	5509
5451	Db	AAACCACTGCGCCCATGTGGAGCACAGATCACCGGACATGTGAAAAACGGTTTCCATCAGGA	5510
5510	Qy	TCGTGGGCGCTPAGAACCTGTGTAGTAACACGTGGCATGGAACATTTCCCATTAACCGCTPACA	5569
5511	Db	TCGTGGGCGCTPAGAACCTGTGTAGTAACACGTGGCATGGAACATTTCCCATTAACCGCTPACA	5570
5570	Qy	CCACGGGCGCCCTGCACGCGCCCTCCCGGGGCCAATATTATTTAGGGGCGCTGTGGCGGGTGG	5629
5571	Db	CCACGGGCGCCCTGCACGCGCCCTCCCGGGGCCAATATTATTTAGGGGCGCTGTGGCGGGTGG	5630
5630	Qy	CTGCTGAGGAGTACGTGGAGGTTACGCGGGTGGGGGATTTCCACTACGTGACGGGGCATGA	5689
5631	Db	CTGCTGAGGAGTACGTGGAGGTTACGCGGGTGGGGGATTTCCACTACGTGACGGGGCATGA	5690
5690	Qy	CCACTGAACAACGTAAAGTGCCCGTGTGAGTTTCGGGCCCCCGAATTTCTTACAGAAAGTGG	5749
5691	Db	CCACTGAACAACGTAAAGTGCCCGTGTGAGTTTCGGGCCCCCGAATTTCTTACAGAAAGTGG	5750
5750	Qy	ATGGGGTTCGGTTGCCACAGGTACCGCTCCAGGCTGCAAAACCCCTCTTACGGGAGGAGTCA	5809
5751	Db	ATGGGGTTCGGTTGCCACAGGTACCGCTCCAGGCTGCAAAACCCCTCTTACGGGAGGAGTCA	5810
5810	Qy	CATTCTTGTTGCGGCTCAATCAATPACTGTTGGGTGTCACAGCTCCCATGCGAGCCGGAAC	5869
5811	Db	CATTCTTGTTGCGGCTCAATCAATPACTGTTGGGTGTCACAGCTCCCATGCGAGCCGGAAC	5870
5870	Qy	CGGACGTAGCAGTGCTCACTTCCATGTCTACCGACCCCTCCCATTAACGGCGGAGACGG	5929
5871	Db	CGGACGTAGCAGTGCTCACTTCCATGTCTACCGACCCCTCCCATTAACGGCGGAGACGG	5930
5930	Qy	CTAAGCGTAGCTGCCACAGGGGATCTCCCGCTCTCTTGGCGAGCTCATCAGCTAGCCAGC	5989
5931	Db	CTAAGCGTAGCTGCCACAGGGGATCTCCCGCTCTCTTGGCGAGCTCATCAGCTAGCCAGC	5990
5990	Qy	TGTCGTGGCGCTTCTTGAAGGCAACATGCACTACCGTCACTGCTCCCGGAGCGCTGACC	6049
5991	Db	TGTCGTGGCGCTTCTTGAAGGCAACATGCACTACCGTCACTGCTCCCGGAGCGCTGACC	6050
6050	Qy	TCATTCAGGCGCAACCTCCTGTGGCGGACGAGATGGCGGGGAAACATCACCCGCGTGGAGT	6109
6051	Db	TCATTCAGGCGCAACCTCCTGTGGCGGACGAGATGGCGGGGAAACATCACCCGCGTGGAGT	6110
6110	Qy	CAGAAAAATAAGGTAGTAAATTTTGGACTCTTTTCAGACCGCTCCAAAGCGGAGGATGAGA	6169
6111	Db	CAGAAAAATAAGGTAGTAAATTTTGGACTCTTTTCAGACCGCTCCAAAGCGGAGGATGAGA	6170
6170	Qy	GGGAAGTATCCGTTCCGGCGGAGATCTGCGGAGGTCCAGGAAATTTCCCTCGAGCCGATGC	6229
6171	Db	GGGAAGTATCCGTTCCGGCGGAGATCTGCGGAGGTCCAGGAAATTTCCCTCGAGCCGATGC	6230
6230	Qy	CCATATGGGCAACCGCCCGGATTAACAACCCCTCCACTGTTTAGAGTCTCTGGAAGGACCCCGACT	6289
6231	Db	CCATATGGGCAACCGCCCGGATTAACAACCCCTCCACTGTTTAGAGTCTCTGGAAGGACCCCGACT	6290
6290	Qy	ACGTCCTCTCAAGTGGTATACAGGGTGTCCATTTGCCGCTGCAAGAGCCCTTCCGATACCAAC	6349
6291	Db	ACGTCCTCTCAAGTGGTATACAGGGTGTCCATTTGCCGCTGCAAGAGCCCTTCCGATACCAAC	6350

QY	6350	CTCCA	CGGAGAA	GAGGACGGTGTCTCTGT	CAGAAATCTACCGTGTCTTTCTG	CGCTTTGGCGG	6409	
DB	6351	CTCCA	CGGAGAA	GAGGACGGTGTCTCTGT	CAGAAATCTACCGTGTCTTTCTG	CGCTTTGGCGG	6410	
QY	6410	AGCTT	CGCCACA	AAGACCTTT	CGGACGCTCCGAAATCGT	CGGCGTCGACAGCGGCACGCAA	6469	
DB	6411	AGCTT	CGCCACA	AAGACCTTT	CGGACGCTCCGAAATCGT	CGGCGTCGACAGCGGCACGCAA	6470	
QY	6470	CGGCTCT	CTCTGAC	CAGCCCTCC	CGACGACGGCGACGGGGATCCG	ATCCGAGTTGAGTCGTACT	6529	
DB	6471	CGGCTCT	CTCTGAC	CAGCCCTCC	CGACGACGGCGACGGGGATCCG	ATCCGAGTTGAGTCGTACT	6530	
QY	6530	CCTCC	ATGCCCCCTTT	GAGGGGAGCGGGGATCCCG	ATCTCAGCGACGGGTCCTTGGT		6589	
DB	6531	CCTCC	ATGCCCCCTTT	GAGGGGAGCGGGGATCCCG	ATCTCAGCGACGGGTCCTTGGT		6590	
QY	6590	CTACCG	TAAAGGAGAGGCT	AGTGAGGACGTCTGCT	CTGCTCGATCGATGCTCTACACATGG	A	6649	
DB	6591	CTACCG	TAAAGGAGAGGCT	AGTGAGGACGTCTGCT	CTGCTCGATGCTCTCTACACATGG	A	6650	
QY	6650	CAGCG	CCCTGATC	ACGCCATGCGCTCGGAGGAA	CCAAAGCTGCCCATCAATGCACTGA		6709	
DB	6651	CAGCG	CCCTGATC	ACGCCATGCGCTCGGAGGAA	CCAAAGCTGCCCATCAATGCACTGA		6710	
QY	6710	GCAACT	CTTTTGCTCCGCT	CACCAAACTTGGTCT	ATGCTACAAATCTTCGAGCGCAAGCC		6769	
DB	6711	GCAACT	CTTTTGCTCCGCT	CACCAAACTTGGTCT	ATGCTACAAATCTTCGAGCGCAAGCC		6770	
QY	6770	TGCGG	CAGAGAAGGT	CACCTTTGACAGACT	CGAGGTCCTGGACGACCACTACCGG	GACG	6829	
DB	6771	TGCGG	CAGAGAAGGT	CACCTTTGACAGACT	CGAGGTCCTGGACGACCACTACCGG	GACG	6830	
QY	6830	TGCTC	AGGAGATCAAG	CGGACGGCTCCACAGTT	TAAGGCTTAACTTCTATCCGTG	GAGG	6889	
DB	6831	TGCTC	AGGAGATCAAG	CGGACGGCTCCACAGTT	TAAGGCTTAACTTCTATCCGTG	GAGG	6890	
QY	6890	AAGCT	CTGAAGCTG	CACGCCCCCA	CATTTCCGCGCAGATCTAA	ATTTGGCTATGCGGCGCAAGG	6949	
DB	6891	AAGCT	CTGAAGCTG	CACGCCCCCA	CATTTCCGCGCAGATCTAA	ATTTGGCTATGCGGCGCAAGG	6950	
QY	6950	ACGTC	CGGAACTT	ATCAGCAAGCCGTTAA	CCACATCCGCTCCGTGTGGAAGCACTGC		7009	
DB	6951	ACGTC	CGGAACTT	ATCAGCAAGCCGTTAA	CCACATCCGCTCCGTGTGGAAGCACTGC		7010	
QY	7010	TGG	AGACACTG	AGACACCAATTTG	ACACCACTCATGGCAAAATAGAGTTTCTGCG		7069	
DB	7011	TGG	AGACACTG	AGACACCAATTTG	ACACCACTCATGGCAAAATAGAGTTTCTGCG		7070	
QY	7070	TCCAA	CCAGAGAGGGGGCG	CGCAAGCGACTCG	CCCTTATCTGATTTCCACAGATTTGGGGG		7129	
DB	7071	TCCAA	CCAGAGAGGGGGCG	CGCAAGCGACTCG	CCCTTATCTGATTTCCACAGATTTGGGGG		7130	
QY	7130	TTCTG	TGTGCGAGAAAT	GGCCCTTTTACGAT	TGGTCTCCACCCTCCCTCAGGCGCGTGA		7189	
DB	7131	TTCTG	TGTGCGAGAAAT	GGCCCTTTTACGAT	TGGTCTCCACCCTCCCTCAGGCGCGTGA		7190	
QY	7190	TGGG	CTCTTCA	TACGGATTC	CAATATCTCTCTG	ACAGCGGGTCGAGTCTCTG	TGATG	7249
DB	7191	TGGG	CTCTTCA	TACGGATTC	CAATATCTCTCTG	ACAGCGGGTCGAGTCTCTG	TGATG	7250
QY	7250	CCTT	GGAAGCGA	AGAAATGCCCTAT	GGCTTCCCATATGACACCGCTGTTT	TGACTCAA	7309	
DB	7251	CCTT	GGAAGCGA	AGAAATGCCCTAT	GGCTTCCCATATGACACCGCTGTTT	TGACTCAA	7310	
QY	7310	CGGT	CACTGAGAAT	TGACATCCG	TGTGAGGAGTCAATCTAC	CAATGTGTGACTTTGGCCCC	7369	
DB	7311	CGGT	CACTGAGAAT	TGACATCCG	TGTGAGGAGTCAATCTAC	CAATGTGTGACTTTGGCCCC	7370	
QY	7370	CCG	AAGCCAGACG	CGCATAAAGT	CTGCTTACAGAGCGGCTTT	ATCATCGGGGGCCCCCTGA	7429	
DB	7371	CCG	AAGCCAGACG	CGCATAAAGT	CTGCTTACAGAGCGGCTTT	ATCATCGGGGGCCCCCTGA	7430	

QY 7430 CTAATTTCTAAGGCGAGAACTGCGGCTATGCGCGTGC CGCGAGCGGTGTA CTGACGA 7489
Db 7431 CTAATTTCTAAGGCGAGAACTGCGGCTATGCGCGTGC CGCGAGCGGTGTA CTGACGA 7490
QY 7490 CAGCTGCGGTAAATACCTCACAATGTTACTTGAAGCGCGCTGCGGCTGTCGAGCTGCGGA 7549
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QY 7550 AGCTCCAGAGCTCAGCATGCTCGTATGCGGAGACGACCTTGTGTTATCTGTGAAGCG 7609
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QY 7910 CTCATTTCTCTCCATCTCTAGCTCAGGAAACAACTTGAAGGCGCTAGATGTCAGA 7969
Db 7911 CTCATTTCTCTCCATCTCTAGCTCAGGAAACAACTTGAAGGCGCTAGATGTCAGA 7970
QY 7970 TCTACGGGGCTGTACTCTCAATGAGCCACTTGACCTTACCTCAGATCATTTCAACGACTCC 8029
Db 7971 TCTACGGGGCTGTACTCTCAATGAGCCACTTGACCTTACCTCAGATCATTTCAACGACTCC 8030
QY 8030 ATGGCTTAGCGCATTTTCACTCCATAGTTACTCTCCAGGTGAGATCAATAGGGTGGCTT 8089
Db 8031 ACGGCTTAGCGCATTTTCACTCCATAGTTACTCTCCAGGTGAGATCAATAGGGTGGCTT 8090
QY 8090 CATGCTCAGGAAACTTTGGGGTACCGCCCTTGGAGTCTGGAGACATCGGGCGAGAGTG 8149
Db 8091 CATGCTCAGGAAACTTTGGGGTACCGCCCTTGGAGTCTGGAGACATCGGGCGAGAGTG 8150
QY 8150 TCCGCGCTAGGCTACTCTCCAGGGGGAGGGCTGCCACTTGTGGCAAGTACTCTTCA 8209
Db 8151 TCCGCGCTAGGCTACTCTCCAGGGGGAGGGCTGCCACTTGTGGCAAGTACTCTTCA 8210
QY 8210 ACTGGGCGTAAAGGACCAAGCTCAAACTCACTCAATCCCGGCTGCGTCCAGTTGGATT 8269
Db 8211 ACTGGGCGTAAAGGACCAAGCTCAAACTCACTCAATCCCGGCTGCGTCCAGTTGGATT 8270
QY 8270 TATCCAGCTGGTTCGTTGCTGTTACAGCGGGGAGACATATATCAAGCCTGTCTCGTG 8329
Db 8271 TATCCAGCTGGTTCGTTGCTGTTACAGCGGGGAGACATATATCAAGCCTGTCTCGTG 8330
QY 8330 CCCGACCCGCTGGTTCATGTCGTCCTACTCTCTTCTGTAGGGGTAGGCATCTATC 8389
Db 8331 CCCGACCCGCTGGTTCATGTCGTCCTACTCTCTTCTGTAGGGGTAGGCATCTATC 8390
QY 8390 TACTTCCCAACCGATGAACGGGAGCTTAAACACTTCCAGGCAATAGGCCATCTGTTTTT 8449
Db 8391 TACTTCCCAACCGATGAACGGGAGCTTAAACACTTCCAGGCAATAGGCCATCTGTTTTT 8450
QY 8450 TTCCC-----TTTTTTTTTTCTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTCTCCT 8505
Db 8451 TTCCCCTTTCTCC 8510
QY 8506 TTTTTTTCTCTTTTTTTCTTTTTCTTTCTTTGGTGGGTCCATCTTAGCCCTAGTCAAC 8565

Db 8511 TTTTTTTCTCTTTTTTTCTTTTCTTTGGTGGTCCATCTTAGCCCTAGTCAAC 8570
QY 8566 GGCTAGCTGTGAAGGTCCTGTGAGCGCTTGA CTGCGAGAGTCTGTATCTGGCCTCTC 8625
Db 8571 GGCTAGCTGTGAAGGTCCTGTGAGCGCTTGA CTGCGAGAGTCTGTATCTGGCCTCTC 8630
QY 8626 TGCAGATCAAGT 8637
Db 8631 TGCAGATCAAGT 8642

RESULT 6
US-10-789-355-6
; Sequence 6, Application US/10789355
; GENERAL INFORMATION:
; APPLICANT: BOEHRINGER INGELHEIM (CANADA) LTD.
; TITLE OF INVENTION: SELF REPLICATING RNA MOLECULE FROM
; TITLE OF INVENTION: HEPATITIS C VIRUS
; FILE REFERENCE: 13/083
; CURRENT APPLICATION NUMBER: US/10/789,355
; CURRENT FILING DATE: 2004-02-27
; PRIOR APPLICATION NUMBER: US/10/029,907
; PRIOR FILING DATE: 2001-12-21
; PRIOR APPLICATION NUMBER: 60/257,857
; PRIOR FILING DATE: 2000-12-22
; NUMBER OF SEQ ID NOS: 25
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 6
; LENGTH: 8638
; TYPE: DNA
; ORGANISM: HCV
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (1802)...(8407)
US-10-789-355-6

Query Match 99.1%; Score 8563.1; DB 1; Length 8638;
Best Local Similarity 99.5%; Pred. No. 0;
Matches 8606; Conservative 0; Mismatches 19; Indels 23; Gaps 2;

QY 2 CCAGCCCCCGATTGGGGCGGACACTCCACCATAGATCACTCCCTGTGAGGAATCTACTGT 61
Db 2 CCAGCCCCCGATTGGGGCGGACACTCCACCATAGATCACTCCCTGTGAGGAATCTACTGT 61
QY 62 CTTCAACGAGAAAGCGTCTAGCCATGGCTTATGATGTCGTGCGAGCCTCCAGGACC 121
Db 62 CTTCAACGAGAAAGCGTCTAGCCATGGCTTATGATGTCGTGCGAGCCTCCAGGACC 121
QY 122 CCCCCTCCGGGAGAGCCATAGTGGTCTGCGGAACCGGTGAGTACACCGGAATTCGACG 181
Db 122 CCCCCTCCGGGAGAGCCATAGTGGTCTGCGGAACCGGTGAGTACACCGGAATTCGACG 181
QY 182 ACAGCCGGGTCTTTCTTTGGATCAACCGCTCAATGCTCGAGATTTGGGGCTGCCCGG 241
Db 182 ACAGCCGGGTCTTTCTTTGGATCAACCGCTCAATGCTCGAGATTTGGGGCTGCCCGG 241
QY 242 CGAGACTGCTAGCCGAGTGTGTTGGGTGCGGAAAGGCTTTGTGCTACTGCTGTATAGG 301
Db 242 CGAGACTGCTAGCCGAGTGTGTTGGGTGCGGAAAGGCTTTGTGCTACTGCTGTATAGG 301
QY 302 TGTCTGAGTGTCCCGGAGGTCTCTGTAAGCCGTGACCATGAGCAGCAATCTTAAACC 361
Db 302 TGTCTGAGTGTCCCGGAGGTCTCTGTAAGCCGTGACCATGAGCAGCAATCTTAAACC 361
QY 362 TCAAGAAACCAACAAAGGCGCCCATGATTGAACAGATGATTGACGAGGTTCTCC 421
Db 362 TCAAGAAACCAACAAAGGCGCCCATGATTGAACAGATGATTGACGAGGTTCTCC 421
QY 422 GGCGCTTGGGTGAGAGGCTATTTCGGCTATGATGGGCAACAACAGCAATCGGCTGCTC 481
Db 422 GGCGCTTGGGTGAGAGGCTATTTCGGCTATGATGGGCAACAACAGCAATCGGCTGCTC 481

QY	482	TGATGCCGCCGTGTTCCGGCTGTACAGCGAGGGGCGCCCGGTCTTTTTGTCAAGACCGA	541
DB	482	TGATGCCGCCGTGTTCCGGCTGTACAGCGAGGGGCGCCCGGTCTTTTTGTCAAGACCGA	541
QY	542	CCTGTCCGGTCCCTTGAATGAATGTCAGGACGAGGCGGGCTATCGTGGCTGGCCAC	601
DB	542	CCTGTCCGGTCCCTTGAATGAATGTCAGGACGAGGCGGGCTATCGTGGCTGGCCAC	601
QY	602	GACGGCGCTTCTTTCGCGCAGCTGTCTCGACGTTGTCACTGAAGCGGGAAGGACTGGCT	661
DB	602	GACGGCGCTTCTTTCGCGCAGCTGTCTCGACGTTGTCACTGAAGCGGGAAGGACTGGCT	661
QY	662	GCTATTGGGCGAAGTGGCGGCGCAGGATCTCTGTCTATCTCACTTGTCTCTGCGGAGAA	721
DB	662	GCTATTGGGCGAAGTGGCGGCGCAGGATCTCTGTCTATCTCACTTGTCTCTGCGGAGAA	721
QY	722	AGTATCCATCATGGCTGATGCAATGCGCGGGCTGCATACGCTTGATCCGGCTACTCGGCC	781
DB	722	AGTATCCATCATGGCTGATGCAATGCGCGGGCTGCATACGCTTGATCCGGCTACTCGGCC	781
QY	782	ATTTCGACCAACCAAGCGAAACATCGCATCGACGAGCAGTACTCGGATGGAAGCGGGTCT	841
DB	782	ATTTCGACCAACCAAGCGAAACATCGCATCGACGAGCAGTACTCGGATGGAAGCGGGTCT	841
QY	842	TGTCGATCAGGATGATCTGGAACGAGAGCATCAGGGGCTCGCGCAGCGAACTGTTGCG	901
DB	842	TGTCGATCAGGATGATCTGGAACGAGAGCATCAGGGGCTCGCGCAGCGAACTGTTGCG	901
QY	902	CAGGCTCAAGCGCGCATGCCCGACGGGAGAGATCTCGTGTGACCCATGCGGATGCGTG	961
DB	902	CAGGCTCAAGCGCGCATGCCCGACGGGAGAGATCTCGTGTGACCCATGCGGATGCGTG	961
QY	962	CTTCCGGAATCATGTGTGGAATGGCCGCTTTTCTGGAATTCAGCTGTGSCCGGCT	1021
DB	962	CTTSCCGAATCATGTGTGGAATGGCCGCTTTTCTGGAATTCAGCTGTGSCCGGCT	1021
QY	1022	GGGTGTGGCGGACCGCTATCAGGACATAGCGTTGGCTACCCGCTGATATTGCTGAAGAGCT	1081
DB	1022	GGGTGTGGCGGACCGCTATCAGGACATAGCGTTGGCTACCCGCTGATATTGCTGAAGAGCT	1081
QY	1082	TGGCGGCGAATGGGCTGACCGCTTCTGTGCTTTACGGTATCGCGGCTCCCGATTCGCA	1141
DB	1082	TGGCGGCGAATGGGCTGACCGCTTCTGTGCTTTACGGTATCGCGGCTCCCGATTCGCA	1141
QY	1142	GCGCATCGCCTTCTATCGCCTTCTTGAGGAGTCTCTCTGAGTT-----TAAAC	1189
DB	1142	GCGCATCGCCTTCTATCGCCTTCTTGAGGAGTCTCTCTGAGTT-----TAAAC	1189
QY	1190	AGACCAACACGGTTTCCCTCTAGCGGGATCAATTCGCGCCCTCTCCCTCCCGCCCGCTA	1249
DB	1202	AGACCAACACGGTTTCCCTCTAGCGGGATCAATTCG-----CCCGCCCGCTA	1250
QY	1250	ACGTTACTGGCGAAGCGGCTTGGAATAAGCGCGGTGTGGTTGTCTATATGTTATTTT	1309
DB	1251	ACGTTACTGGCGAAGCGGCTTGGAATAAGCGCGGTGTGGTTGTCTATATGTTATTTT	1310
QY	1310	CCACCATATTCGCGCTTTTGGCAATGTGAGGGCCCGGAACCTGGCCCTGTCTTCTTGA	1369
DB	1311	CCACCATATTCGCGCTTTTGGCAATGTGAGGGCCCGGAACCTGGCCCTGTCTTCTTGA	1370
QY	1370	CGAGCATTCCTAGGGGTCTTTTCCCTCTCGCCAAAGGAATGCAAGGTCTGTGAATGTG	1429
DB	1371	CGAGCATTCCTAGGGGTCTTTTCCCTCTCGCCAAAGGAATGCAAGGTCTGTGAATGTG	1430
QY	1430	TGAAGGAAGCAGTTCTCTGGAAGCTTTCTTGAAGACAAACAAAGTCTGTAGCGACCTTT	1489
DB	1431	TGAAGGAAGCAGTTCTCTGGAAGCTTTCTTGAAGACAAACAAAGTCTGTAGCGACCTTT	1490
QY	1490	GCAAGCAGCGGAACCCCGACCTGGCGACAGTGCCTCTCGGCGCAAAAGCCACGTGTAT	1549
DB	1491	GCAAGCAGCGGAACCCCGACCTGGCGACAGTGCCTCTCGGCGCAAAAGCCACGTGTAT	1550
QY	1550	AAGATACACCTGCAAAAGCGGCGCAACCCCGAGTGCACGTTGTGAGTTGATAGTTGTGG	1609

1551	DB	AAAGATACACCTGCAAAAGCGCGCAAAACCCAGTGCCAGCTGTGTGAGTTGGATAGTTGTGG	1610
1610	QY	AAAGAGCTCAAAATGGCTCTCCTCAAGCGTATTTCAACAAGGGCTGAAGGATGCCAGAAGG	1669
1611	DB	AAAGAGTCAAAATGGCTCTCCTCAAGCGTATTTCAACAAGGGCTGAAGGATGCCAGAAGG	1670
1670	QY	TACCCCAATTTGATGGGATCTGATCTGGGGCCTCGGTGCACATGCTTTACATGTTTGTAGT	1729
1671	DB	TACCCCAATTTGATGGGATCTGATCTGGGGCCTCGGTGCACATGCTTTACATGTTTGTAGT	1730
1730	QY	CGAGGTTAAAAACGCTTAGGCCCCCGAACCACGGGGACGTGTTTTCCTTTTGAAAAAC	1789
1731	DB	CGAGGTTAAAAACGCTTAGGCCCCCGAACCACGGGGACGTGTTTTCCTTTTGAAAAAC	1790
1790	QY	ACGATAATACCATGGACCGGGAGATGACAGCATCGTGGAGGGCGGTTTTTCGTAGGTC	1849
1791	DB	ACGATAATACCATGGACCGGGAGATGACAGCATCGTGGAGGGCGGTTTTTCGTAGGTC	1850
1850	QY	TGATACCTTTGACTTTGTCAACGCACCTATAAGCTGTTCCTCGCTAGGCTCATATGTTGT	1909
1851	DB	TGATACCTTTGACTTTGTCAACGCACCTATAAGCTGTTCCTCGCTAGGCTCATATGTTGT	1910
1910	QY	TACAAATATTTTATCACAGGGCCGAGGCAACATTGCAAGTGTGATCCCCCCCCCTCAACG	1969
1911	DB	TACAAATATTTTATCACAGGGCCGAGGCAACATTGCAAGTGTGATCCCCCCCCCTCAACG	1970
1970	QY	TTTCGGGGGGCGCGATGCGTCTCCTCTCAGTGGCGGATCCACCAGAGCTAATCT	2029
1971	DB	TTTCGGGGGGCGCGATGCGTCTCCTCTCAGTGGCGGATCCACCAGAGCTAATCT	2030
2030	QY	TTACCATCACAAAATCTTGTCTCGCCATACTCGGTCCACTCATGTGCTCCAGGCTGATA	2089
2031	DB	TTACCATCACAAAATCTTGTCTCGCCATACTCGGTCCACTCATGTGCTCCAGGCTGATA	2090
2090	QY	TAAACAAAGTGCGTACTTGTGCGGGGCAACGSGGCTCATTTGTGCATGCAATGCTGGTGC	2149
2091	DB	TAAACAAAGTGCGTACTTGTGCGGGGCAACGSGGCTCATTTGTGCATGCAATGCTGGTGC	2150
2150	QY	GGAAAGTTGCTGGGGTCAATTATGTCGAATGGCTCTCATGAAGTGGCGCCACTGACAG	2209
2151	DB	GGAAAGTTGCTGGGGTCAATTATGTCGAATGGCTCTCATGAAGTGGCGCCACTGACAG	2210
2210	QY	GTACGTACGTTTATGACCATCTCACCCCACTGCGGGACTGGGCCCAACGCGGGCTACGAG	2269
2211	DB	GTACGTACGTTTATGACCATCTCACCCCACTGCGGGACTGGGCCCAACGCGGGCTACGAG	2270
2270	QY	ACTTTGGGTGGCAGTTGAGCCCGTCTTCTCTGATATGGAGACCAAGGTTATCACT	2329
2271	DB	ACTTTGGGTGGCAGTTGAGCCCGTCTTCTCTGATATGGAGACCAAGGTTATCACT	2330
2330	QY	GGGGGGCAGACACCGGGCGTGTGGGACATCATCTTGGGGCTCCCGCTCCCGCCGCA	2389
2331	DB	GGGGGGCAGACACCGGGCGTGTGGGACATCATCTTGGGGCTCCCGCTCCCGCCGCA	2390
2390	QY	GGGGGAGGAGATACATCTGGGACCGGACAGACGCTTGAAGGGCAGGGGTGGGACTCC	2449
2391	DB	GGGGGAGGAGATACATCTGGGACCGGACAGACGCTTGAAGGGCAGGGGTGGGACTCC	2450
2450	QY	TCGCGCCTATTACGGCCTACTCCCAAACAGCGAGGCTTCTTTGGGTGCAATCATCTA	2509
2451	DB	TCGCGCCTATTACGGCCTACTCCCAAACAGCGAGGCTTCTTTGGGTGCAATCATCTA	2510
2510	QY	GCCTCACAGCCGGACAGGAACGAGTTCGAGGGGAGGTCCTCAAGTGGTCTCCACCGCA	2569
2511	DB	GCCTCACAGCCGGACAGGAACGAGTTCGAGGGGAGGTCCTCAAGTGGTCTCCACCGCA	2570
2570	QY	CACAATCTTCTCGCGACCTCGTCAATGGCGTGTGTGGACTGTCTATCATGTGCGG	2629
2571	DB	CACAATCTTCTCGCGACCTCGTCAATGGCGTGTGTGGACTGTCTATCATGTGCGG	2630
2630	QY	GCTCAAAGACCTTTCGCGCCCAAGGGGCCAATCAACCCAAATGTACACCAATGTGGAC	2689

Db 2631 GCTCAAAGACCTTTGCGGCCAAAGGGGCCAATCACCCAAATGTATACAAATGTGGACC 2690
Qy 2690 AGGACCTCGTCCGCTGGCAAGCGCCCCCGGGGCGGTTCTTTGACACCATGACACCTGG 2749
Db 2691 AGGACCTCGTCCGCTGGCAAGCGCCCCCGGGGCGGTTCTTTGACACCATGACACCTGG 2750
Qy 2750 GCAGCTCGGACCTTTACTTTGGTCAACGAGGCATGCCCGATGTCAATTCGGGTGCGCGCGGG 2809
Db 2751 GCAGCTCGGACCTTTACTTTGGTCAACGAGGCATGCCCGATGTCAATTCGGGTGCGCGGG 2810
Qy 2810 GCGACAGCAGGGGAGGCTACTCTCCGCCAGGCCGCTCTCTACTTTGAAGGGCTCTTCGG 2869
Db 2811 GCGACGCGAGGGGAGGCTACTCTCCGCCAGGCCGCTCTCTACTTTGAAGGGCTCTTCGG 2870
Qy 2870 GCGGTCCACTGCTCTGCCCTCGGGGACGCTGTGGGCATCTTTTCGGGTGCGCGGTGCA 2929
Db 2871 GCGGTCCACTGCTCTGCCCTCGGGGACGCTGTGGGCATCTTTTCGGGTGCGCGGTGCA 2930
Qy 2930 CCGAGCGGTTGCAAGGCGGTGCACTTTGTACCCGTCGAGTCTATGGAAACCACTATGC 2989
Db 2931 CCGAGCGGTTGCAAGGCGGTGCACTTTGTACCCGTCGAGTCTATGGAAACCACTATGC 2990
Qy 2990 GGTCCCGGTTCTTACGGCAAACTCGTCCCTCCGCGCTACCGCAGACATTCAGGTGG 3049
Db 2991 GGTCCCGGTTCTTACGGCAAACTCGTCCCTCCGCGCTACCGCAGACATTCAGGTGG 3050
Qy 3050 CCGATCTACCGCCCTACTGTTAGGGCAAGAGCACTAAGGTGCGCGCTGCGTATGCGAG 3109
Db 3051 CCGATCTACCGCCCTACTGTTAGGGCAAGAGCACTAAGGTGCGCGCTGCGTATGCGAG 3110
Qy 3110 CCCAAGGATATAGGTGCTTGTCTGAACCCGTCGTCGCGCCACCTTAGGTTTCGGGG 3169
Db 3111 CCCAAGGATATAGGTGCTTGTCTGAACCCGTCGTCGCGCCACCTTAGGTTTCGGGG 3170
Qy 3170 CGTATATGCTAAGGCACATGTTATCGACCTTAACATCAGAACCGGGTAAGGACCATCA 3229
Db 3171 CGTATATGCTAAGGCACATGTTATCGACCTTAACATCAGAACCGGGTAAGGACCATCA 3230
Qy 3230 CCAAGGTTGCCCATCAGTACTCCACCTATGGCAAGTTCTTTCGCGACGGTGGTTGCT 3289
Db 3231 CCAAGGTTGCCCATCAGTACTCCACCTATGGCAAGTTCTTTCGCGACGGTGGTTGCT 3290
Qy 3290 CTGGGGCGCTATGACATCAATATGTCATGAGTGCACCTCAACTGACTCGACCACTA 3349
Db 3291 CTGGGGCGCTATGACATCAATATGTCATGAGTGCACCTCAACTGACTCGACCACTA 3350
Qy 3350 TCCTGGGCATCGGCACAGTCTCTGACCAAGCGAGACGGCTGGAGCGGACTCGTCTGTC 3409
Db 3351 TCCTGGGCATCGGCACAGTCTCTGACCAAGCGAGACGGCTGGAGCGGACTCGTCTGTC 3410
Qy 3410 TCGCCACCGCTACGCTCCGGATCGGTCAACGTCACATCCAAACATCGAGAGGTGG 3469
Db 3411 TCGCCACCGCTACGCTCCGGATCGGTCAACGTCACATCCAAACATCGAGAGGTGG 3470
Qy 3470 CTCTGTCACACTGAGAAATCCCTTTTATGGCAAGCCATCCCATCGAGACCATCA 3529
Db 3471 CTCTGTCACACTGAGAAATCCCTTTTATGGCAAGCCATCCCATCGAGACCATCA 3530
Qy 3530 AGGGGGGAGGACCTCATTTCTGCCCATTCCCAAGAGAAATGTGATGAGCTCGCGCGA 3589
Db 3531 AGGGGGGAGGACCTCATTTCTGCCCATTCCCAAGAGAAATGTGATGAGCTCGCGCGA 3590
Qy 3590 AGCTGTCCGGCTCGGACTCAATGCTGTAGCATATTACCGGGGCTTTGATGTATCCGTC 3649
Db 3591 AGCTGTCCGGCTCGGACTCAATGCTGTAGCATATTACCGGGGCTTTGATGTATCCGTC 3650
Qy 3650 TACCACTAGCGAGAGCGTATTGTCGTAGCAACGAGCGCTCTAATGACGGGCTTTACCG 3709
Db 3651 TACCACTAGCGAGAGCGTATTGTCGTAGCAACGAGCGCTCTAATGACGGGCTTTACCG 3710
Qy 3710 GCGATTTGCACTGACGTGCAATACATGTTGTCACCCAGACAGTGCATTCAGCC 3769
Db 3711 GCGATTTGCACTGACGTGCAATACATGTTGTCACCCAGACAGTGCATTCAGCC 3770

Qy 3770 TGGACCCGACCTTTCACCTTTGAGACGACGACCGTGCACAAAGACGCGGTGTCACGCTCGC 3829
Db 3771 TGGACCCGACCTTTCACCTTTGAGACGACGACCGTGCACAAAGACGCGGTGTCACGCTCGC 3830
Qy 3830 AGCGGAGGACGAGACTGTGTAGGGGACAGGATTTAGGGCAATTTACAGTTTGTGATCTCAGAG 3889
Db 3831 AGCGGAGGACGAGACTGTGTAGGGGACAGGATTTAGGGCAATTTACAGTTTGTGATCTCAGAG 3890
Qy 3890 AACGGCCCTCGGCAATGTTTCGATTCCTCGGTCTGTGCGAGTGTATGACCGGGGCTGTG 3949
Db 3891 AACGGCCCTCGGCAATGTTTCGATTCCTCGGTCTGTGCGAGTGTATGACCGGGGCTGTG 3950
Qy 3950 CTTGGTACGAGCTACAGCCCGCGAGACCTCAGTTAGTTTCCGGCTTACCTTAAACACAC 4009
Db 3951 CTTGGTACGAGCTACAGCCCGCGAGACCTCAGTTAGTTTCCGGCTTACCTTAAACACAC 4010
Qy 4010 CAGGTTTGGCCGCTGCGCAGGACCATCTGGAGTTCTGGGAGAGCTCTTTTACAGGCTCA 4069
Db 4011 CAGGTTTGGCCGCTGCGCAGGACCATCTGGAGTTCTGGGAGAGCTCTTTTACAGGCTCA 4070
Qy 4070 CCCACATAGACGCCCATTTCTTGTCCAGACTAAGCAGGACAGGAGACAACTTCCCTTACC 4129
Db 4071 CCCACATAGACGCCCATTTCTTGTCCAGACTAAGCAGGACAGGAGACAACTTCCCTTACC 4130
Qy 4130 TGGTAGCATACAGGCTACGCTGCGCAGGCTCAGGCTCCACTCCATCTGCTGGGACC 4189
Db 4131 TGGTAGCATACAGGCTACGCTGCGCAGGCTCAGGCTCCACTCCATCTGCTGGGACC 4190
Qy 4190 AAATGTGGAAGTGTCTCATACGGCTAAAGCTTAGCTGCAAGGGCCAAACGCGCTTGTGT 4249
Db 4191 AAATGTGGAAGTGTCTCATACGGCTAAAGCTTAGCTGCAAGGGCCAAACGCGCTTGTGT 4250
Qy 4250 ATAGCTGGGAGCGGTTCAAAACAGAGTTTACTACACACACCCCATTAACAAATACATCA 4309
Db 4251 ATAGCTGGGAGCGGTTCAAAACAGAGTTTACTACACACACCCCATTAACAAATACATCA 4310
Qy 4310 TGGCATCATCTCGGCTGACCTGGAGTCTGTCAGGACACCTGGGTGCTGGTAGGGAG 4369
Db 4311 TGGCATCATCTCGGCTGACCTGGAGTCTGTCAGGACACCTGGGTGCTGGTAGGGAG 4370
Qy 4370 TCCTAGCAGCTCTGCGCGCGTATTTCCTGCAAAACAGGACAGGCTGCTCATTTGCGGACGA 4429
Db 4371 TCCTAGCAGCTCTGCGCGCGTATTTCCTGCAAAACAGGACAGGCTGCTCATTTGCGGACGA 4430
Qy 4430 TCATCTTTGTCGGAAGCGCGGCAATCATTCCTGCAAGGAGTCTTTTACCGGGAGTTGCG 4489
Db 4431 TCATCTTTGTCGGAAGCGCGGCAATCATTCCTGCAAGGAGTCTTTTACCGGGAGTTGCG 4490
Qy 4490 ATGAGATGGAGAGTGGCCCTCACACCTCCCTTACATCGAACGGAATGACGCTCGCG 4549
Db 4491 ATGAGATGGAGAGTGGCCCTCACACCTCCCTTACATCGAACGGAATGACGCTCGCG 4550
Qy 4550 AACAAATCAAACAGAGCAATCGGTTGCTGCAAAACAGCAACCAAGCAAGCGGAGGCTG 4609
Db 4551 AACAAATCAAACAGAGCAATCGGTTGCTGCAAAACAGCAACCAAGCAAGCGGAGGCTG 4610
Qy 4610 CTGCTCCCGTGGTGAATTCGAAGTGGCGGACCTCGAAGCCCTCTGGGCGAAGCATATGT 4669
Db 4611 CTGCTCCCGTGGTGAATTCGAAGTGGCGGACCTCGAAGCCCTCTGGGCGAAGCATATGT 4670
Qy 4670 GGAATTTTCATCAGCGGATCAATATTTAGCAGGCTGTGTCATCTGCTGCGAAGCCCG 4729
Db 4671 GGAATTTTCATCAGCGGATCAATATTTAGCAGGCTGTGTCATCTGCTGCGAAGCCCG 4730
Qy 4730 CGATAGCATCACTGATGCGATTTCAGGCTTATCACCGAGCCGCTCACACCCACATCA 4789
Db 4731 CGATAGCATCACTGATGCGATTTCAGGCTTATCACCGAGCCGCTCACACCCACATCA 4790
Qy 4790 CCCTCTCTGTTTAAACATCTCTGGGGGATGGGTGGCGGCCCAACTTGTCTCTCCAGCGCTG 4849
Db 4791 CCCTCTCTGTTTAAACATCTCTGGGGGATGGGTGGCGGCCCAACTTGTCTCTCCAGCGCTG 4850

QY	4850	CTTCTGCTTTCTGATGGCCCGGCATCGCTGAGCGGCTGTGGCAGCATAGCGCTTGGA	4909
Db	4851	CTTCTGCTTTCTGATGGCCCGGCATCGCTGAGCGGCTGTGGCAGCATAGCGCTTGGA	4910
QY	4910	AGTGCTTTGGATATTTTGGCAGTTATGGAGCAGGGTGGCAGCGCGCTCGTGCGCT	4969
Db	4911	AGTGCTTTGGATATTTTGGCAGTTATGGAGCAGGGTGGCAGCGCGCTCGTGCGCT	4970
QY	4970	TTAAGGTCATAGCGCGGAGATGCCCTCCACCGAGGACCTGGTTAACTACTCTCCCTGCTA	5029
Db	4971	TTAAGGTCATAGCGCGGAGATGCCCTCCACCGAGGACCTGGTTAACTACTCTCCCTGCTA	5030
QY	5030	TCCTCTCCCTGCGCCCTAGTCTGTCGGGGTCTGTGCGCAGCATACTGCGTGGCAAG	5089
Db	5031	TCCTCTCCCTGCGCCCTAGTCTGTCGGGGTCTGTGCGCAGCATACTGCGTGGCAAG	5090
QY	5090	TGGGCCCAGGGGAGGGGCTGTGCAGTGGATGAACCGGCTGATAGCGTTGCTTTCGGGG	5149
Db	5091	TGGGCCCAGGGGAGGGGCTGTGCAGTGGATGAACCGGCTGATAGCGTTGCTTTCGGGG	5150
QY	5150	GTAACCACTCTCCCCACGACATATGTGCTGAGAGGAGCGTGCAGCAGTGTCACTC	5209
Db	5151	GTAACCACTCTCCCCACGACATATGTGCTGAGAGGAGCGTGCAGCAGTGTCACTC	5210
QY	5210	AGATCTCTCTAGTCTTTACCATCACTCAGCTGCTGAAGAGGCTTCAACAGTGAATCAAG	5269
Db	5211	AGATCTCTCTAGTCTTTACCATCACTCAGCTGCTGAAGAGGCTTCAACAGTGAATCAAG	5270
QY	5270	AGGACTGCTCCACGCCATGCTCCGGCTCGTGGCTAAGAGATGTTTGGATTTGGATATGCA	5329
Db	5271	AGGACTGCTCCACGCCATGCTCCGGCTCGTGGCTAAGAGATGTTTGGATTTGGATATGCA	5330
QY	5330	CGGTGTGACTGATTTCAAGACCTGGCTCCAGTCCAAAGCTCTGCCCGGATTTGCCGGAG	5389
Db	5331	CGGTGTGACTGATTTCAAGACCTGGCTCCAGTCCAAAGCTCTGCCCGGATTTGCCGGAG	5390
QY	5390	TCCCTCTTTCTCACTGTCACAGTGGGTACAAAGGAGTCTGGCGGGCGACGGCATATGC	5449
Db	5391	TCCCTCTTTCTCATGTCAACAGTGGGTACAAAGGAGTCTGGCGGGCGACGGCATATGC	5450
QY	5450	AAACCACTCTGCCCATGTGGAGCAGACATCAACCGGACATGTGAATAAAGGATGGA	5509
Db	5451	AAACCACTCTGCCCATGTGGAGCAGACATCAACCGGACATGTGAATAAAGGATGGA	5510
QY	5510	TCGTGGGCTTAGGACTGTAGTAAACAGTGGCATGGAACATTTCCCATTAACCGCTACA	5569
Db	5511	TCGTGGGCTTAGGACTGTAGTAAACAGTGGCATGGAACATTTCCCATTAACCGCTACA	5570
QY	5570	CCACGGGCCCTGCACGCGCTCCCGCGCCAAATTTCTTAGGGCGCTGTGGGGTGG	5629
Db	5571	CCACGGGCCCTGCACGCGCTCCCGCGCCAAATTTCTTAGGGCGCTGTGGGGTGG	5630
QY	5630	CTGCTGAGGAGTACGTGGAGTTACCGGGTGGGGATTTCCACTAGTGCACGGGCATGA	5689
Db	5631	CTGCTGAGGAGTACGTGGAGTTACCGGGTGGGGATTTCCACTAGTGCACGGGCATGA	5690
QY	5690	CCAATGACAAAGTAAAGTGCCTGTGTCAGTTCCGGCCCCCGAAATTTCTTCAAGAGTGG	5749
Db	5691	CCAATGACAAAGTAAAGTGCCTGTGTCAGTTCCGGCCCCCGAAATTTCTTCAAGAGTGG	5750
QY	5750	ATGGGGTGGGTTGCAACAGTACGCTCCAGCGTGGCAACCCCTCTTACGGGAGAGGTCA	5809
Db	5751	ATGGGGTGGGTTGCAACAGTACGCTCCAGCGTGGCAACCCCTCTTACGGGAGAGGTCA	5810
QY	5810	CATTCTGTGTGGGCTCAATCAATACCTGTTGGTTCACAGCTCCCATGCGAGCCGAAAC	5869
Db	5811	CATTCTGTGTGGGCTCAATCAATACCTGTTGGTTCACAGCTCCCATGCGAGCCGAAAC	5870
QY	5870	CGGACGTAGCAGTGTCACTTCCATGCTCAACGACCCCTCCCACTTTACCGCGGAGACGG	5929
Db	5871	CGGACGTAGCAGTGTCACTTCCATGCTCAACGACCCCTCCCACTTTACCGCGGAGACGG	5930
QY	5930	CTAAGCGTAGGCTGGCCAGGGGATCTCCCCCTCTCTTGGCCAGCTCATACGTAGCCAGC	5989

Db	5931	CTAAGCGTAGGCTGGCCAGGGGATCTCCCTCCCTCTTGGCCAGCTCATCAGCTAGCCAGC	5990
QY	5990	TGTCTGCGCCTTCTTGAAGCAACATGCACTACCCGCTCATGACTCCCGGAGCGCTGACC	6049
Db	5991	TGTCTGCGCCTTCTTGAAGCAACATGCACTACCCGCTCATGACTCCCGGAGCGCTGACC	6050
QY	6050	TCATCGAGGCCAACTCTCTGTGGGGCAGGAGATGGGGGGAACATCACTCCCGCTGGAGT	6109
Db	6051	TCATCGAGGCCAACTCTCTGTGGGGCAGGAGATGGGGGGAACATCACTCCCGCTGGAGT	6110
QY	6110	CAGAAATAAGGTAGTAAATTTTGACTCTTTGAGCCGCTCCAAAGCGGAGGATGAGA	6169
Db	6111	CAGAAATAAGGTAGTAAATTTTGACTCTTTGAGCCGCTCCAAAGCGGAGGATGAGA	6170
QY	6170	GGGAAGTATCCGTTCCGGCGGAGATCTCGGAGGTCAGGAAATTTCCCTCGAGCGATGC	6229
Db	6171	GGGAAGTATCCGTTCCGGCGGAGATCTCGGAGGTCAGGAAATTTCCCTCGAGCGATGC	6230
QY	6230	CCATATGGGCAAGCCGCTTACAACTTCACTGCTTAGAGTCTCTGGAAGGACCCGGACT	6289
Db	6231	CCATATGGGCAAGCCGCTTACAACTTCACTGCTTAGAGTCTCTGGAAGGACCCGGACT	6290
QY	6290	ACGTCCCTTCCAGTGTGTACACGGGTGTCCATTTGCCGCTGCCCCAAGGCCCTCCGATACCAC	6349
Db	6291	ACGTCCCTTCCAGTGTGTACACGGGTGTCCATTTGCCGCTGCCCCAAGGCCCTCCGATACCAC	6350
QY	6350	CTCACCGAGGAAGAGGACGGTGTCTGTGTCAGAAATTTACCGTGTCTTCTGCTGGCGG	6409
Db	6351	CTCACCGAGGAAGAGGACGGTGTCTGTGTCAGAAATTTACCGTGTCTTCTGCTGGCGG	6410
QY	6410	AGCTCGCCACAAAGACCTTCCGAGCTCCGAAATCGTGGCGCTCGACAGCGCACCGGCAA	6469
Db	6411	AGCTCGCCACAAAGACCTTCCGAGCTCCGAAATCGTGGCGCTCGACAGCGCACCGGCAA	6470
QY	6470	CGGCTCTCTGACACAGCCCTCCGACAGCGGCGACCGGGGATCCGACGTTGAGTCTGACT	6529
Db	6471	CGGCTCTCTGACACAGCCCTCCGACAGCGGCGACCGGGGATCCGACGTTGAGTCTGACT	6530
QY	6530	CCTCCATGCCCCCTTGAAGGGGAGCGGGGATCCCGATCTCAGACGAGCGGTCTTGGT	6589
Db	6531	CCTCCATGCCCCCTTGAAGGGGAGCGGGGATCCCGATCTCAGACGAGCGGTCTTGGT	6590
QY	6590	CTACCGTTAAGGAGGAGCTAGTGAGGACGCTGCTGCTGCTCGATGCTCTACACATGA	6649
Db	6591	CTACCGTTAAGGAGGAGGCTAGTGAGGACGCTGCTGCTGCTCGATGCTCTACACATGA	6650
QY	6650	CAGCGCCCTGATCAACGCCATGCGCTCGGAGGAAACCAAGCTGCCCATCAATGCACTGA	6709
Db	6651	CAGCGCCCTGATCAACGCCATGCGCTCGGAGGAAACCAAGCTGCCCATCAATGCACTGA	6710
QY	6710	GCAACTTTTGTCTCCGTCAACCACTTGGTCTATGTGTACCAATCTCGACGCAAGCC	6769
Db	6711	GCAACTTTTGTCTCCGTCAACCACTTGGTCTATGTGTACCAATCTCGACGCAAGCC	6770
QY	6770	TGCGGCAAGAAAGGTCACTTTGACAGACTGCGAGGTCCTGGAACCACTACCGGGAGC	6829
Db	6771	TGCGGCAAGAAAGGTCACTTTGACAGACTGCGAGGTCCTGGAACCACTACCGGGAGC	6830
QY	6830	TGCTCAAGGAGTGAAGCGGAGGCTCCACAGTTAAGGCTAACTTCTATCCGTGGAGG	6889
Db	6831	TGCTCAAGGAGTGAAGCGGAGGCTCCACAGTTAAGGCTAACTTCTATCCGTGGAGG	6890
QY	6890	AAGCCTGTAAAGTGAACGCCCTCCACATTTCCGGCCAGATCTAAATTTTGGCTATGGGCAAGG	6949
Db	6891	AAGCCTGTAAAGTGAACGCCCTCCACATTTCCGGCCAGATCTAAATTTTGGCTATGGGCAAGG	6950
QY	6950	ACGTCCGGAACCTTATCCAGAAAGCCCTTAAACCACTCCGCTCGGTGTGGAAGGACTTGC	7009
Db	6951	ACGTCCGGAACCTTATCCAGAAAGCCCTTAAACCACTCCGCTCGGTGTGGAAGGACTTGC	7010
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Qy 8570 AGCTGTGAAGGTCGCTGAGCGCTTGAATGACAGAGTGTGATCTGCGCTCTCTGCA 8629
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Db 8631 GATCAAGT 8638

RESULT 7
US-10-789-355-5
; Sequence 5, Application US/10789355
; GENERAL INFORMATION:
; APPLICANT: BOEHRINGER INGELHEIM (CANADA) LTD.
; TITLE OF INVENTION: SELF REPLICATING RNA MOLECULE FROM
; TITLE OF INVENTION: HEPATITIS C VIRUS
; FILE REFERENCE: 13/083
; CURRENT APPLICATION NUMBER: US/10789,355
; CURRENT FILING DATE: 2004-02-27
; PRIOR APPLICATION NUMBER: US/10/029,907
; PRIOR FILING DATE: 2001-12-21
; PRIOR APPLICATION NUMBER: 60/257,857
; PRIOR FILING DATE: 2000-12-22
; NUMBER OF SEQ ID NOS: 25
; SOFTWARE: Fast-Seq for Windows Version 4.0
; SEQ ID NO 5
; LENGTH: 8648
; TYPE: DNA
; ORGANISM: HCV
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (1802)... (8407)
US-10-789-355-5

Query Match 99.0%; Score 8552.3; DB 1; Length 8648;
Best Local Similarity 99.4%; Pred. No. 0;
Matches 8609; Conservative 0; Mismatches 17; Indels 33; Gaps 3;
Qy 1 GCCAGCCCCGATTTGGGGGCGACACTCCACATAGATCACTCCCTGTGAGGAATCTACTG 60
Db 1 GCCAGCCCCGATTTGGGGGCGACACTCCACATAGATCACTCCCTGTGAGGAATCTACTG 60
Qy 61 TCTTCAGCAGAAAGCGTCTAGCCATGCGGTATGATGATGCTGCTGAGCCTCCAGGAC 120

Db 61 TCTTACGACGAAAGCGCTAGCCATGCGGTAGTATGAGTGTGCTGCGAGCTCCAGGAC 120
Qy 121 CCCCCCTCCCGGAGAGCCATAGTGTCTCGGAAACCGGTGAGTACACCGAAATGGCCAG 180
Db 121 CCCCCCTCCCGGAGAGCCATAGTGTCTCGGAAACCGGTGAGTACACCGAAATGGCCAG 180
Qy 181 GACGACCGGGTCTCTTTCTTGATCAACCCCGCTCAATGCTCGAGATTTGGCGGTGCCCCC 240
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Qy 241 GCGAGACTGCTAGCCGAGTAGTGTGGGTGCGGAAAGCCCTTGTGTAATGCTGCTGATAGG 300
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Qy 301 GTGCTTCGAGTGCCTCCGCGAGGTCTGTAGACCGTGCACCATGAGCACGAATCCTAAAC 360
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Qy 421 CGGCGCTTCGGGTGAGAGCTATTCGGCTATGACTGGGCAACAACAGCAATCGGCTGCT 480
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Qy 481 CTGATGCGCGCTGTTCCGGCTGTACGCGCAGGCGCGCGCTTCTTTTGTCAAGACCG 540
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Qy 541 ACCTGTCGGTGCCTGTAATGAACTGACGACGAGGCGCGCTATCGTGGCTGGCCA 600
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Db 661 TGCTATTTGGCGAGTGTCCGGGAGGATCTCTGTCACTTCACCTTGTCTTCCCGAGA 720
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Db 781 CATTTGACCAACCAAGCGAAACATCGATCGAGCGAGCACGCTACTCGGATGGAAGCCGGTC 840
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; CURRENT FILING DATE: 2004-02-27
; PRIOR APPLICATION NUMBER: US/10/029,907
; PRIOR FILING DATE: 2001-12-21
; PRIOR APPLICATION NUMBER: 60/257,857
; PRIOR FILING DATE: 2000-12-22
; NUMBER OF SEQ ID NOS: 25
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 4
; LENGTH: 8643
; TYPE: DNA
; ORGANISM: HCV
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (1802)...(8407)
US-10-789-355-4

Query Match      98.9%; Score 8542.6; DB 1; Length 8643;
Best Local Similarity 99.4%; Pred. No. 0;
Matches 8601; Conservative 0; Mismatches 24; Indels 28; Gaps 3;

QY 2 CCAAGCCCGGATGGGGGCGACACTCCACCATAGATCACTCCCTGTGAGGAACACTACTGT 61
DB 2 CCAAGCCCGGATGGGGGCGACACTCCACCATAGATCACTCCCTGTGAGGAACACTACTGT 61
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1550 AAGATACCTGCAAGGCGGCAACCCAGTGCACGTTGTGAGTTGGATGTTGG 1609
1551 AAGATACCTGCAAGGCGGCAACCCAGTGCACGTTGTGAGTTGGATGTTGG 1610
1610 AAGAGTCAAAATGGCTCTCTCAAGGATTTCAAGAGGCGCTGAAGATGCCAGAGG 1669
1611 AAGAGTCAAAATGGCTCTCTCAAGGATTTCAAGAGGCGCTGAAGATGCCAGAGG 1670
1670 TACCCATTCATGGGATCTGATCTGGGCTCTCGGTGCAATGCTTTACATGTTTGTAGT 1729
1671 TACCCATTCATGGGATCTGATCTGGGCTCTCGGTGCAATGCTTTACATGTTTGTAGT 1730
1730 CGAGGTTTAAAAAACGCTTAGGCCCCCGAACAAGGAGCGTGGTTTCTTTGAAAAAC 1789
1731 CGAGGTTTAAAAAACGCTTAGGCCCCCGAACAAGGAGCGTGGTTTCTTTGAAAAAC 1790
1790 ACATATAACATGAGCGGAGATGCAAGATCTGTCGAGGCGCGGTTTTCGTAGGTC 1849
1791 ACATATAACATGAGCGGAGATGCAAGATCTGTCGAGGCGCGGTTTTCGTAGGTC 1850
1850 TGATATCTTTCGCTTGTCAAGCTTATGAGCTTTCCTCGCTAGGCTCATATGTTGCT 1909
```

1851 TGATCTCTTGACCTTTGTCACCGCATATTAAGCTGTTCTCGCTAGGCTCATATGGTGGT 1910
1910 TACAATATTTTATCACAGGGCGAGGCACACTTGGCAAGTGTGATGATCCCGCCCTCAACG 1969
1911 TACAATATTTTATCACAGGGCGAGGCACACTTGGCAAGTGTGATGATCCCGCCCTCAACG 1970
1970 TTCCGGGGGGCGCGGATGCGGTCTCATCTCTCTCACGTGCGGATCCACCCAGAGACTAATCT 2029
1971 TTCCGGGGGGCGCGGATGCGGTCTCATCTCTCTCACGTGCGGATCCACCCAGAGACTAATCT 2030
2030 TTACCAATCACAAAATCTTTGCTCGCATCTCTCGGTCTCATCTCATGTTGCTCCAGGCTGGTA 2089
2031 TTACCAATCACAAAATCTTTGCTCGCATCTCTCGGTCTCATCTCATGTTGCTCCAGGCTGGTA 2090
2090 TAACCAAGTGGCGTACTTGGTGGCGGCACAGGGGCTCATTTCTGATGATGATGCTGGTGC 2149
2091 TAACCAAGTGGCGTACTTGGTGGCGGCACAGGGGCTCATTTCTGATGATGATGCTGGTGC 2150
2150 GGAAGGTGGTGGGGGTCTATATGTCCTCAATGGCTCTCATGAAGTTGGCGGCTGACAG 2209
2151 GGAAGGTGGTGGGGGTCTATATGTCCTCAATGGCTCTCATGAAGTTGGCGGCTGACAG 2210
2210 GTACGTACGTTTATGACCAATCTCACCCCACTGGGGACTGGGCGCAAGGGGCTTACGAG 2269
2211 GTACGTACGTTTATGACCAATCTCACCCCACTGGGGACTGGGCGCAAGGGGCTTACGAG 2270
2270 ACCTTGGGTGGGAGTTGAGCCCGTCTCTCTGATATGGAGACCAAGGTTATCACTT 2329
2271 ACCTTGGGTGGGAGTTGAGCCCGTCTCTCTCTGATATGGAGACCAAGGTTATCACTT 2330
2330 GGGGGGCGAGACCGGGCGGTGGGAGCATCATCTTGGGCGCTCTCGCCCGCA 2389
2331 GGGGGGCGAGACCGGGCGGTGGGAGCATCATCTTGGGCGCTCTCGCCCGCA 2390
2390 GGGGGGAGGAGATACATCTGGGACCGGCAGAGCCCTTGAAGGGCGAGGGGTGGCGACTCC 2449
2391 GGGGGGAGGAGATACATCTGGGACCGGCAGAGCCCTTGAAGGGCGAGGGGTGGCGACTCC 2450
2450 TCGGGCTTATGCGCTTACTCCCAACAGAGCGGAGCCCTTCTTGGTGTGATCATCACTA 2509
2451 TCGGGCTTATGCGGCTTACTCCCAACAGAGCGGAGCCCTTCTTGGTGTGATCATCACTA 2510
2510 GCCTCAGAGCCGGGACAGGAACAGGTGAGGGGAGGTCGAAGTGTCTCCACCGCAA 2569
2511 GCCTCAGAGCCGGGACAGGAACAGGTGAGGGGAGGTCGAAGTGTCTCCACCGCAA 2570
2570 CACAATCTTCTGGGACCTGGGTCAATGGCGTGTGTGGACTGTCTATCATGGTGGCG 2629
2571 CACAATCTTCTGGGACCTGGGTCAATGGCGTGTGTGGACTGTCTATCATGGTGGCG 2630
2630 GCTCAAGAACCTTGGCGGCCAAAGGGCCCAATACCCAAATGTACCAATGTGGACC 2689
2631 GCTCAAGAACCTTGGCGGCCAAAGGGCCCAATACCCAAATGTACCAATGTGGACC 2690
2690 AGGACTCGTGGTGGCAGAGCCCGCCGGGGCGGTTCTTGGACACCATGACCTGGC 2749
2691 AGGACTCGTGGTGGCAGAGCCCGCCGGGGCGGTTCTTGGACACCATGACCTGGC 2750
2750 GCAGCTCGGACCTTTACTTGGTACAGGAGCATGCGGATGTCAATTCGGTGGCGGGGG 2809
2751 GCAGCTCGGACCTTTACTTGGTACAGGAGCATGCGGATGTCAATTCGGTGGCGGGGG 2810
2810 GCGACAGAGGGGAGCTTACTCTCCCGCCAGGCGCGTCTCTACTTGAAGGGCTCTTCGG 2869
2811 GCGACAGAGGGGAGCTTACTCTCTCCCGCCAGGCGCGTCTCTACTTGAAGGGCTCTTCGG 2870
2870 GCGGTCACTGTCTTGGCGGCAAGCGTGTGGGCACTTTTCGGGCTGGCGGTGTGCA 2929
2871 GCGGTCACTGTCTTGGCGGCAAGCGTGTGGGCACTTTTCGGGCTGGCGGTGTGCA 2930
2930 CCGAGGGGTGGCAAGCGGTGACCTTTGTACCGGTGAGTCTATGGAACCACTATGC 2989
2931 CCGAGGGGTGGCAAGCGGTGAGCTTTGTACCGGTGAGTCTATGGAACCACTATGC 2990

2990 GGTCCCGGTCTTTCACGGCAAACTCGTCCCTCCGGCGGTACCGCAGACATTTCCAGGTGG 3049
2991 GGTCCCGGTCTTTCACGGCAAACTCGTCCCTCCGGCGGTACCGCAGACATTTCCAGGTGG 3050
3050 CCATCTACACGGCCCTTACTGGTAGCGGCAAGAGCACTAAGGTGCCGGCTCGGTATGCG 3109
3051 CCATCTACACGGCCCTTACTGGTAGCGGCAAGAGCACTAAGGTGCCGGCTCGGTATGCG 3110
3110 CCNAGGGTATAGGTGCTTGTCTGAACCGGTCCGTCCGCCGCCACCTAGGTTTCGGGG 3169
3111 CCNAGGGTATAGGTGCTTGTCTGAACCGGTCCGTCCGCCGCCACCTAGGTTTCGGGG 3170
3170 CGTATATGTCTAAGGCACATGGTATCCAGCCCTAATCATCAGAACCGGGGTAAAGCACTCA 3229
3171 CGTATATGTCTAAGGCACATGGTATCCAGCCCTAATCATCAGAACCGGGGTAAAGCACTCA 3230
3230 CCACGGGTGCCCCCATCACGTACTCCACCTATATGATGAGTGCACCTCACTGACTCGACCACTA 3349
3231 CCACGGGTGCCCCCATCACGTACTCCACCTATATGCAAGTTTCTTTCGCCGACGCTGTTGCT 3290
3290 CTGGGGGGGCTTATGACATCATATATATGATGAGTGCACCTCACTGACTCGACCACTA 3350
3350 TCCTGGGCATCGGCACAGTCTCTGACCAAGCGGAGAGCGCTGGAGCGGCACTCTGCTGTC 3409
3351 TCCTGGGCATCGGCACAGTCTCTGACCAAGCGGAGAGCGCTGGAGCGGCACTCTGCTGTC 3410
3410 TCGCACCGGTACTACGCTCCGGGATCGGTACCGTGCCACATCCAAACATCGAGGAGGTGG 3469
3411 TCGCACCGGTACTACGCTCCGGGATCGGTACCGTGCCACATCCAAACATCGAGGAGGTGG 3470
3470 CTCTGTCCAGCATGCGGAGAAATCCCTTTTATGCGCAAGCCATCCCATTCGAGACCACTA 3529
3471 CTCTGTCCAGCATGCGGAGAAATCCCTTTTATGCGCAAGCCATCCCATTCGAGACCACTA 3530
3530 AGGGGGGGGACCTCATTTTCTGCCATTCCTCAAGAGAAATGTGATGAGCTCGCGCGCA 3589
3531 AGGGGGGGGAGGACCTCATTTTCTGCCATTCCTCAAGAGAAATGTGATGAGCTCGCGCGCA 3590
3590 AGCTGTCCGGCTCGGACTCAATGCTGTAGCATATTCACGGGGGCTTGTATTCGCTCA 3649
3591 AGCTGTCCGGCTCGGACTCAATGCTGTAGCATATTCACGGGGGCTTGTATTCGCTCA 3650
3650 TACCAATAGCGGAGAGCTCATTTGTGTAGCAACGAGCGCTCTAATGACGGGCTTTACCG 3709
3651 TACCAATAGCGGAGAGCTCATTTGTGTAGCAACGAGCGCTCTAATGACGGGCTTTACCG 3710
3710 GCGATTTGCACTCAGTGTGATCGACTGATGATGATGATGATGATGATGATGATGATGATG 3769
3711 GCGATTTGCACTCAGTGTGATCGACTGATGATGATGATGATGATGATGATGATGATGATG 3770
3770 TGGACCCGACCTTCAACATTCGAGACGACGCGTGCACAAAGACGCGGTGTCACTGCTGC 3829
3771 TGGACCCGACCTTCAACATTCGAGACGACGCGTGCACAAAGACGCGGTGTCACTGCTGC 3830
3830 AGCGCGGAGGAGGAGCTGGTAGGGGAGGATGGGCAATTTACAGGTTTGTGATCTCAGGAG 3889
3831 AGCGCGGAGGAGGAGCTGGTAGGGGAGGATGGGCAATTTACAGGTTTGTGATCTCAGGAG 3890
3890 AACGGCCCTCGGGGATGTTTCGATTTCTCGGTTCTGTGCGAGTGTATGACGCGGGCTGTG 3949
3891 AACGGCCCTCGGGGATGTTTCGATTTCTCGGTTCTGTGCGAGTGTATGACGCGGGCTGTG 3950
3950 CTTCGTACGAGCTCACGCCCGCGAGACCTCAGTTAGGTTCGGGCTTACCTAAACACAC 4009
3951 CTTCGTACGAGCTCACGCCCGCGAGACCTCAGTTAGGTTCGGGCTTACCTAAACACAC 4010
4010 CAGGTTTGGCCGTCTGCCAGGACCATCTGGAGTTCTGGGAGAGCGTCTTTACAGGCTCA 4069
4011 CAGGTTTGGCCGTCTGCCAGGACCATCTGGAGTTCTGGAGTTCTGGGAGGCGCTTTTACAGGCTCA 4070

4070 CCACATAGACGCCCATTTCTTGTCCAGACTAAGCAGGCGAGAGCAAACTTCCCTTACC 4129
4071 CCACATAGACGCCCATTTCTTGTCCAGACTAAGCAGGCGAGAGCAAACTTCCCTTACC 4130
4130 TGTAGCATACAGGCTACGGTGTGGCCAGGGCTCAGGCTCCACCTCCATCGTGGGACC 4189
4131 TGTAGCATACAGGCTACGGTGTGGCCAGGGCTCAGGCTCCACCTCCATCGTGGGACC 4190
4190 AAATGTGGAGTGTCTCATACGGCTAAAGCTTACGCTGCACGGGCCAAACCCCTCTGT 4249
4191 AAATGTGGAGTGTCTCATACGGCTAAAGCTTACGCTGCACGGGCCAAACCCCTCTGT 4250
4250 ATAGGCTGGAGCCGTTCAAACAGAGTTACTACACACACCCCATAAACAAATACATCA 4309
4251 ATAGGCTGGAGCCGTTCAAACAGAGTTACTACACACACCCCATAAACAAATACATCA 4310
4310 TGGCATGCATGTCCGCTGACCTGGAGTGTCTACGAGCACTCGGTCTGGTAGGGGAG 4369
4311 TGGCATGCATGTCCGCTGACCTGGAGTGTCTACGAGCACTCGGTCTGGTAGGGGAG 4370
4370 TCCTAGCAGCTTGGCCGGTATTTGGCTGACACAGGCAAGCGTGGTCAATTTGGGAGGA 4429
4371 TCCTAGCAGCTTGGCCGGTATTTGGCTGACACAGGCAAGCGTGGTCAATTTGGGAGGA 4430
4430 TCATCTTGTCCGAAAGCCGGCCATCATTCGCCACAGGGAAGTCTTACCGGGAGTTCCG 4489
4431 TCATCTTGTCCGAAAGCCGGCCATCATTCGCCACAGGGAAGTCTTACCGGGAGTTCCG 4490
4490 ATGAGTGAAGAGTCCGCTCTACACTCCCTTACATCGAACAGGGAATCGAGCTCCCG 4549
4491 ATGAGTGAAGAGTCCGCTCTACACTCCCTTACATCGAACAGGGAATCGAGCTCCCG 4550
4550 AACAAATTCACACAGAGGCAATCGGTTGCTGCAACAGGCAACAGCAAGCGAGGCTG 4609
4551 AACAAATTCACACAGAGGCAATCGGTTGCTGCAACAGGCAACAGCAAGCGAGGCTG 4610
4610 CTGCTCCGCTGGTGGAAATCCAGTGGCGGACCTCGAAGCTTCTGGCGGAACATATGT 4669
4611 CTGCTCCGCTGGTGGAAATCCAGTGGCGGACCTCGAAGCTTCTGGCGGAACATATGT 4670
4670 GGAATTTTATCAGCGGGATACAAATATTTAGCAGGCTTGTCACTCTGCCTGGCAACCCCG 4729
4671 GGAATTTTATCAGCGGGATACAAATATTTAGCAGGCTTGTCACTCTGCCTGGCAACCCCG 4730
4730 CGATAGCATCATGTATGGCATTCACAGCTCTATACAGCCGCTCACCACCCACATA 4789
4731 CGATAGCATCATGTATGGCATTCACAGCTCTATACAGCCGCTCACCACCCACATA 4790
4790 CCTCTCTGTTAAACATCTCGGGGGATGGGTGGCCGCCAACTTGTCTCTCCAGCGCTG 4849
4791 CCTCTCTGTTAAACATCTCGGGGGATGGGTGGCCGCCAACTTGTCTCTCCAGCGCTG 4850
4850 CTTCTGCTTTCTAGCGCGCGCATCGCTGGAGCGCTGTGTGACGATAGGCTTTGGGA 4909
4851 CTTCTGCTTTCTAGCGCGCGCATCGCTGGAGCGCTGTGTGACGATAGGCTTTGGGA 4910
4910 AGGTGCTGTGATATTTTGGCAGGTTATGGAGCAGGGTGGCAGCGCGCTGTGGCCT 4969
4911 AGGTGCTGTGATATTTTGGCAGGTTATGGAGCAGGGTGGCAGCGCGCTGTGGCCT 4970
4970 TTAAGGTATAGCGCGGAGATGCCCTCCACCGAGGACCTGGTTAACTACTCTCTGCTA 5029
4971 TTAAGGTATAGCGCGGAGATGCCCTCCACCGAGGACCTGGTTAACTACTCTCTGCTA 5030
5030 TCCTCTCCCTCGCGCCCTAGTGTCTGGGCTGTGTGCGCAGGATACCTGGCTGGCAGC 5089
5031 TCCTCTCCCTCGCGCCCTAGTGTCTGGGCTGTGTGCGCAGGATACCTGGCTGGCAGC 5090
5090 TGGGCCCAGGGAGGGGCTGTGAGTGAACCGGCTGTAGCGTTTCGCTTCGCGG 5149
5091 TGGGCCCAGGGAGGGGCTGTGAGTGAACCGGCTGTAGCGTTTCGCTTCGCGG 5150
5150 GTAAACACGCTCTCCCCCAGCCTATGTGCTGAGAGCGGCTGACGACGCTGTCACTC 5209

5151 GTAAACACGCTCTCCCCCAGCCTATGTGCTGAGAGCGACGCTGACGACGCTGTCACTC 5210
5210 AGATCTCTCTAGTCTTACCATCACTCAGCTCTCAAGAGGCTTCAACAGTGGATCAACG 5269
5211 AGATCTCTCTAGTCTTACCATCACTCAGCTCTCAAGAGGCTTCAACAGTGGATCAACG 5270
5270 AGGACTGTCCACGCCATCTCCGGCTCGTGGCTAAGAGATGTTTGGGATTTGGATATGCA 5329
5271 AGGACTGTCCACGCCATCTCCGGCTCGTGGCTAAGAGATGTTTGGGATTTGGATATGCA 5330
5330 CGGTGTGACTGATTTCAAGACCTTGGCTCCAGTCCAAAGCTCTTGGCGGATTTGGCGGAG 5389
5331 CGGTGTGACTGATTTCAAGACCTTGGCTCCAGTCCAAAGCTCTTGGCGGATTTGGCGGAG 5390
5390 TCCCTCTTCTCATGTCAACGTTGGGTACAGGGAGTCTGGCGGGCGGACGATCATGC 5449
5391 TCCCTCTTCTCATGTCAACGTTGGGTACAGGGAGTCTGGCGGGCGGACGATCATGC 5450
5450 AAACACCTGCTCCATGTGGAGCAGATCACCGGACATGTGAAACACGTTCCATGAGGA 5509
5451 AAACACCTGCTCCATGTGGAGCAGATCACCGGACATGTGAAACACGTTCCATGAGGA 5510
5510 TCGTGGGCTTAGGACCTGTAGTAAACGCTGCATGGAACATTTCCCAATTAACGCGTACA 5569
5511 TCGTGGGCTTAGGACCTGTAGTAAACGCTGCATGGAACATTTCCCAATTAACGCGTACA 5570
5570 CCACGGGCTTGCACGCGCTCCCGGCGCAAAATATTTCTAGGGGCTGTGGCGGGTGG 5629
5571 CCACGGGCTTGCACGCGCTCCCGGCGCAAAATATTTCTAGGGGCTGTGGCGGGTGG 5630
5630 CTGCTGAGGAGTACGTGAGGTTACGCGGTTGGGGATTTCCACTACGTGACGGGATCA 5689
5631 CTGCTGAGGAGTACGTGAGGTTACGCGGTTGGGGATTTCCACTACGTGACGGGATCA 5690
5690 CCACTGACAAAGTAAAGTTCAGGTTCCGGGCTCCCGAAATTTCTTTCACAGAGTGG 5749
5691 CCACTGACAAAGTAAAGTTCAGGTTCCGGGCTCCCGAAATTTCTTTCACAGAGTGG 5750
5750 ATGGGCTGGGTTGCAAGTACGCTCAGGTGCAAAACCCCTCTTACGGGAGGTTCA 5809
5751 ATGGGCTGGGTTGCAAGTACGCTCAGGTGCAAAACCCCTCTTACGGGAGGTTCA 5810
5810 CATTCTGGTGGGCTCAATCAATACCTGTTGGTTCAGCTCCCATGCGAGCCGAC 5869
5811 CATTCTGGTGGGCTCAATCAATACCTGTTGGTTCAGCTCCCATGCGAGCCGAC 5870
5870 CGGACGTAGCAGTGTCTCACTTCCATGCTCAGGACCCCTCCACATTTACGGCGGAGACG 5929
5871 TGGACGTAGCAGTGTCTCACTTCCATGCTCAGGACCCCTCCACATTTACGGCGGAGACG 5930
5930 CTAAGCGTAGGCTGGCCAGGGATCTCCCTCTCTGGCCAGCTCATCAGTAGCCAGC 5989
5931 CTAAGCGTAGGCTGGCCAGGGATCTCCCTCTCTGGCCAGCTCATCAGTAGCCAGC 5990
5990 TGTCTGGCCTTCTTGAAGCAATGCACTACCGCTCATGCTCCCGGAGCTGACC 6049
5991 TGTCTGGCCTTCTTGAAGCAATGCACTACCGCTCATGCTCCCGGAGCTGACC 6050
6050 TCATCGAGGCCAACCTCTCTGGCGGAGGAGATGGCGGGAAACATACCCCGTGGAGT 6109
6051 TCATCGAGGCCAACCTCTCTGGCGGAGGAGATGGCGGGAAACATACCCCGTGGAGT 6110
6110 CAGAAATAAGGTAGTAAATTTTGGACTCTTTTCGAGCCGCTCCAGCGGAGGAGTGA 6169
6111 CAGAAATAAGGTAGTAAATTTTGGACTCTTTTCGAGCCGCTCCAGCGGAGGAGTGA 6170
6170 GGAAGTATCCGTTTCGGCGGAGATCTTGGGAGGTTCAGGAAATTTCCCTCGAGCGATGC 6229
6171 GGAAGTATCCGTTTCGGCGGAGATCTTGGGAGGTTCAGGAAATTTCCCTCGAGCGATGC 6230
6230 CCATATGGGACCGCGGATTAACCCCTCCACTGTTAGCTCTTGGAGGACCGGACT 6289


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Db 6238 CCATATGGGATCGCTCGAGGGAATTTCTTGACCTCGCAGGATCTCCGCCGGAACGGA 6179
Qy 6239 CAGCCCGGATTACAACCTCCACTGTTAGAGTCTCTGGAAGCACCAGACTACGTCCT 6297
Db 6178 TACTTCCCTCTCATCTCTCCGCTTCGGAGCGGCTCGAAGAGTCCAAAATTACTACCT 6120
```

```
RESULT 16
US-10-789-355-2/c
; Sequence 2, Application US/10789355
; GENERAL INFORMATION:
; APPLICANT: BOEHRINGER INGELHEIM (CANADA) LTD.
; TITLE OF INVENTION: SELF REPLICATING RNA MOLECULE FROM
; FILE REFERENCE: 13/083
; CURRENT APPLICATION NUMBER: US/10/789,355
; CURRENT FILING DATE: 2004-02-27
; PRIOR APPLICATION NUMBER: US/10/029,907
; PRIOR FILING DATE: 2001-12-21
; PRIOR APPLICATION NUMBER: 60/257,857
; PRIOR FILING DATE: 2000-12-22
; NUMBER OF SEQ ID NOS: 25
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 2
; LENGTH: 8642
; TYPE: DNA
; ORGANISM: HCV
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (1802)...(8407)
; FEATURE:
; NAME/KEY: variation
; LOCATION: 6288
; OTHER INFORMATION: r = a or g
; NAME/KEY: variation
; LOCATION: 4446
; OTHER INFORMATION: r = a or g
US-10-789-355-2
```

```
Query Match 0.4%; Score 33; DB 1; Length 8642;
Best Local Similarity 48.6%; Pred. No. 3.4;
Matches 87; Conservative 1; Mismatches 91; Indels 0; Gaps 0;

Qy 6119 AGTAGTAATTTGGACTCTTTGAGCCGCTCCAAGCGGAGGAGTGAAGAGGAAGTAT 6178
Db 6298 AGGAGCGTAGTCGCGGTCCTTCCAGGACTCYAACAGTGGAGGGTTGTAATCCGCGGTGC 6239
Qy 6179 CCGTTCCGCGGAGATCTTCGGAGGTCCAGGAATTCCTCGAGCGATCCCATATGGG 6238
Db 6238 CCATATGGGATCGCTCGAGGGAATTTCTTGGACCTCCGAGGATCTCCGCCGGAACGGA 6179
Qy 6239 CAGCCCGGATTACAACCTCCACTGTTAGAGTCTCGAAGGACCGGACTACGTCCT 6297
Db 6178 TACTTCCCTCTCATCTCTCCGCTTCGGAGCGGCTCGAAGAGTCCAAAATTACTACCT 6120
```

```
RESULT 17
US-10-789-355-4/c
; Sequence 4, Application US/10789355
; GENERAL INFORMATION:
; APPLICANT: BOEHRINGER INGELHEIM (CANADA) LTD.
; TITLE OF INVENTION: SELF REPLICATING RNA MOLECULE FROM
; FILE REFERENCE: 13/083
; CURRENT APPLICATION NUMBER: US/10/789,355
; CURRENT FILING DATE: 2004-02-27
; PRIOR APPLICATION NUMBER: US/10/029,907
; PRIOR FILING DATE: 2001-12-21
; PRIOR APPLICATION NUMBER: 60/257,857
; PRIOR FILING DATE: 2000-12-22
; NUMBER OF SEQ ID NOS: 25
```

```
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 4
; LENGTH: 8643
; TYPE: DNA
; ORGANISM: HCV
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (1802)...(8407)
US-10-789-355-4
```

```
Query Match 0.4%; Score 31.8; DB 1; Length 8643;
Best Local Similarity 64.0%; Pred. No. 4;
Matches 48; Conservative 0; Mismatches 27; Indels 0; Gaps 0;

Qy 858 CTGGACGAAGAGCATCAGGGGCTCGCGCAGCCGAACTGTTCCGACAGGCTCAAGGCGCG 917
Db 932 CTCGCCGTCCGGCATGCGGCTTGAGCTGCGAACAAGTTCGGTGGCGGAGCCCTG 873
Qy 918 ATGCCCGACGGCGAG 932
Db 872 ATGCTCTTCGTCCAG 858
```

```
RESULT 18
US-10-789-355-15/c
; Sequence 15, Application US/10789355
; GENERAL INFORMATION:
; APPLICANT: BOEHRINGER INGELHEIM (CANADA) LTD.
; TITLE OF INVENTION: SELF REPLICATING RNA MOLECULE FROM
; FILE REFERENCE: 13/083
; CURRENT APPLICATION NUMBER: US/10/789,355
; CURRENT FILING DATE: 2004-02-27
; PRIOR APPLICATION NUMBER: US/10/029,907
; PRIOR FILING DATE: 2001-12-21
; PRIOR APPLICATION NUMBER: 60/257,857
; PRIOR FILING DATE: 2000-12-22
; NUMBER OF SEQ ID NOS: 25
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 15
; LENGTH: 39
; TYPE: DNA
; ORGANISM: HCV
US-10-789-355-15
```

```
Query Match 0.4%; Score 31.2; DB 1; Length 39;
Best Local Similarity 91.7%; Pred. No. 60;
Matches 33; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

Qy 1155 TATCGCTTCTTGACGAGTTCCTCTGAGTTAAACA 1190
Db 39 TATCGCTTCTTGACGAGTTCCTCTGAGTTAAACA 4
```

```
RESULT 19
US-10-789-355-17
; Sequence 17, Application US/10789355
; GENERAL INFORMATION:
; APPLICANT: BOEHRINGER INGELHEIM (CANADA) LTD.
; TITLE OF INVENTION: SELF REPLICATING RNA MOLECULE FROM
; FILE REFERENCE: 13/083
; CURRENT APPLICATION NUMBER: US/10/789,355
; CURRENT FILING DATE: 2004-02-27
; PRIOR APPLICATION NUMBER: US/10/029,907
; PRIOR FILING DATE: 2001-12-21
; PRIOR APPLICATION NUMBER: 60/257,857
; PRIOR FILING DATE: 2000-12-22
; NUMBER OF SEQ ID NOS: 25
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 17
; LENGTH: 30
; TYPE: DNA
```

```
; ORGANISM: HCV
US-10-789-355-17

Query Match      0.3%; Score 30; DB 1; Length 30;
Best Local Similarity 100.0%; Pred. No. 84;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 66 ACCGAGAAAGCGTCTAGCCATGCGGTAGT 95
|||||
Db 1 ACCGAGAAAGCGTCTAGCCATGCGGTAGT 30

RESULT 20
US-10-789-355-18/c
; Sequence 18, Application US/10789355
; GENERAL INFORMATION:
; APPLICANT: BOHRINGER INGELHEIM (CANADA) LTD.
; TITLE OF INVENTION: SELF REPLICATING RNA MOLECULE FROM
; FILE REFERENCE: 13/083
; CURRENT APPLICATION NUMBER: US/10789,355
; PRIOR FILING DATE: 2004-02-27
; PRIOR APPLICATION NUMBER: US/10/029,907
; PRIOR FILING DATE: 2001-12-21
; PRIOR APPLICATION NUMBER: 60/257,857
; PRIOR FILING DATE: 2000-12-22
; NUMBER OF SEQ ID NOS: 25
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 18
; LENGTH: 30
; TYPE: DNA
; ORGANISM: HCV
US-10-789-355-18

Query Match      0.3%; Score 30; DB 1; Length 30;
Best Local Similarity 100.0%; Pred. No. 84;
Matches 30; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 292 CCTGATAGGCTGCTTGGAGTGCCTCCGGA 321
|||||
Db 30 CCTGATAGGCTGCTTGGAGTGCCTCCGGA 1

RESULT 21
US-10-789-355-14
; Sequence 14, Application US/10789355
; GENERAL INFORMATION:
; APPLICANT: BOHRINGER INGELHEIM (CANADA) LTD.
; TITLE OF INVENTION: SELF REPLICATING RNA MOLECULE FROM
; FILE REFERENCE: 13/083
; CURRENT APPLICATION NUMBER: US/10789,355
; PRIOR FILING DATE: 2004-02-27
; PRIOR APPLICATION NUMBER: US/10/029,907
; PRIOR FILING DATE: 2001-12-21
; PRIOR APPLICATION NUMBER: 60/257,857
; PRIOR FILING DATE: 2000-12-22
; NUMBER OF SEQ ID NOS: 25
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 14
; LENGTH: 36
; TYPE: DNA
; ORGANISM: HCV
US-10-789-355-14

Query Match      0.3%; Score 28; DB 1; Length 36;
Best Local Similarity 100.0%; Pred. No. 1.1e+02;
Matches 28; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 386 CATGATTGAACAAGATGATTGCACGCA 413
|||||
Db 9 CATGATTGAACAAGATGATTGCACGCA 36

; ORGANISM: HCV
US-10-789-355-21/c
; Sequence 21, Application US/10789355
; GENERAL INFORMATION:
; APPLICANT: BOHRINGER INGELHEIM (CANADA) LTD.
; TITLE OF INVENTION: SELF REPLICATING RNA MOLECULE FROM
; FILE REFERENCE: 13/083
; CURRENT APPLICATION NUMBER: US/10789,355
; PRIOR FILING DATE: 2004-02-27
; PRIOR APPLICATION NUMBER: US/10/029,907
; PRIOR FILING DATE: 2001-12-21
; PRIOR APPLICATION NUMBER: 60/257,857
; PRIOR FILING DATE: 2000-12-22
; NUMBER OF SEQ ID NOS: 25
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 21
; LENGTH: 27
; TYPE: DNA
; ORGANISM: HCV
US-10-789-355-21

Query Match      0.3%; Score 27; DB 1; Length 27;
Best Local Similarity 100.0%; Pred. No. 1.5e+02;
Matches 27; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 587 ATCGTGGCTGCCACGACGGCGGTCC 613
|||||
Db 27 ATCGTGGCTGCCACGACGGCGGTCC 1

RESULT 23
US-10-789-355-23/c
; Sequence 23, Application US/10789355
; GENERAL INFORMATION:
; APPLICANT: BOHRINGER INGELHEIM (CANADA) LTD.
; TITLE OF INVENTION: SELF REPLICATING RNA MOLECULE FROM
; FILE REFERENCE: 13/083
; CURRENT APPLICATION NUMBER: US/10789,355
; PRIOR FILING DATE: 2004-02-27
; PRIOR APPLICATION NUMBER: US/10/029,907
; PRIOR FILING DATE: 2001-12-21
; PRIOR APPLICATION NUMBER: 60/257,857
; PRIOR FILING DATE: 2000-12-22
; NUMBER OF SEQ ID NOS: 25
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 23
; LENGTH: 27
; TYPE: DNA
; ORGANISM: HCV
US-10-789-355-23

Query Match      0.3%; Score 25.4; DB 1; Length 27;
Best Local Similarity 96.3%; Pred. No. 2e+02;
Matches 26; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 6690 GCTGCCCATCAATGCACCTGACCACTC 6716
|||||
Db 27 GCTGCCCATCAATGCACCTGACCACTC 1

RESULT 24
US-10-789-355-19
; Sequence 19, Application US/10789355
; GENERAL INFORMATION:
; APPLICANT: BOHRINGER INGELHEIM (CANADA) LTD.
; TITLE OF INVENTION: SELF REPLICATING RNA MOLECULE FROM
; FILE REFERENCE: 13/083
; CURRENT APPLICATION NUMBER: US/10789,355
; CURRENT FILING DATE: 2004-02-27
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; PRIOR APPLICATION NUMBER: US/10/029,907
; PRIOR FILING DATE: 2001-12-21
; PRIOR APPLICATION NUMBER: 60/257,857
; PRIOR FILING DATE: 2000-12-22
; NUMBER OF SEQ ID NOS: 25
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 19
; LENGTH: 26
; TYPE: DNA
; ORGANISM: HCV
; FEATURE:
; OTHER INFORMATION: Label with FAM: fluorescence reporter dye
; OTHER INFORMATION: Label with TAMRA: Quencher dye
US-10-789-355-19

Query Match
Best Local Similarity 96.2%; Score 24.4; DB 1; Length 26;
Matches 25; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 144 TGGTCTCGGGAACGGTGAGTACACC 169
Db 1 TGGTCTCGGGAACGGTGAGTACACC 26

RESULT 25
US-10-789-355-10
; Sequence 10, Application US/10789355
; GENERAL INFORMATION:
; APPLICANT: BOEHRINGER INGELHEIM (CANADA) LTD.
; TITLE OF INVENTION: SELF REPLICATING RNA MOLECULE FROM
; TITLE OF INVENTION: HEPATITIS C VIRUS
; FILE REFERENCE: 13/083
; CURRENT APPLICATION NUMBER: US/10/789,355
; CURRENT FILING DATE: 2004-02-27
; PRIOR APPLICATION NUMBER: US/10/029,907
; PRIOR FILING DATE: 2001-12-21
; PRIOR APPLICATION NUMBER: 60/257,857
; PRIOR FILING DATE: 2000-12-22
; NUMBER OF SEQ ID NOS: 25
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 10
; LENGTH: 33
; TYPE: DNA
; ORGANISM: HCV
US-10-789-355-10

Query Match
Best Local Similarity 96.0%; Score 23.4; DB 1; Length 33;
Matches 24; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1185 TAAACAGACCACCAACGGTTTCCCTC 1209
Db 9 TTAACAGACCACCAACGGTTTCCCTC 33

RESULT 26
US-10-789-355-11/c
; Sequence 11, Application US/10789355
; GENERAL INFORMATION:
; APPLICANT: BOEHRINGER INGELHEIM (CANADA) LTD.
; TITLE OF INVENTION: SELF REPLICATING RNA MOLECULE FROM
; TITLE OF INVENTION: HEPATITIS C VIRUS
; FILE REFERENCE: 13/083
; CURRENT APPLICATION NUMBER: US/10/789,355
; CURRENT FILING DATE: 2004-02-27
; PRIOR APPLICATION NUMBER: US/10/029,907
; PRIOR FILING DATE: 2001-12-21
; PRIOR APPLICATION NUMBER: 60/257,857
; PRIOR FILING DATE: 2000-12-22
; NUMBER OF SEQ ID NOS: 25
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 11
; LENGTH: 30

Query Match
Best Local Similarity 100.0%; Score 15; DB 1; Length 45;
Matches 15; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GCCAGCCCCCGATTG 15
Db 31 GCCAGCCCCCGATTG 45

; TYPE: DNA
; ORGANISM: HCV
US-10-789-355-11

Query Match
Best Local Similarity 100.0%; Score 23; DB 1; Length 30;
Matches 23; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1782 TGAATAACACGATATACCATGG 1804
Db 30 TGAATAACACGATATACCATGG 8

RESULT 27
US-10-789-355-22
; Sequence 22, Application US/10789355
; GENERAL INFORMATION:
; APPLICANT: BOEHRINGER INGELHEIM (CANADA) LTD.
; TITLE OF INVENTION: SELF REPLICATING RNA MOLECULE FROM
; TITLE OF INVENTION: HEPATITIS C VIRUS
; FILE REFERENCE: 13/083
; CURRENT APPLICATION NUMBER: US/10/789,355
; CURRENT FILING DATE: 2004-02-27
; PRIOR APPLICATION NUMBER: US/10/029,907
; PRIOR FILING DATE: 2001-12-21
; PRIOR APPLICATION NUMBER: 60/257,857
; PRIOR FILING DATE: 2000-12-22
; NUMBER OF SEQ ID NOS: 25
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 22
; LENGTH: 23
; TYPE: DNA
; ORGANISM: HCV
US-10-789-355-22

Query Match
Best Local Similarity 95.7%; Score 21.4; DB 1; Length 23;
Matches 22; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 2293 GTCGTCTTCTCTGATATGGAGAC 2315
Db 1 GTCGTCTTCTCTGATATGGAGAC 23

RESULT 28
US-10-789-355-12
; Sequence 12, Application US/10789355
; GENERAL INFORMATION:
; APPLICANT: BOEHRINGER INGELHEIM (CANADA) LTD.
; TITLE OF INVENTION: SELF REPLICATING RNA MOLECULE FROM
; TITLE OF INVENTION: HEPATITIS C VIRUS
; FILE REFERENCE: 13/083
; CURRENT APPLICATION NUMBER: US/10/789,355
; CURRENT FILING DATE: 2004-02-27
; PRIOR APPLICATION NUMBER: US/10/029,907
; PRIOR FILING DATE: 2001-12-21
; PRIOR APPLICATION NUMBER: 60/257,857
; PRIOR FILING DATE: 2000-12-22
; NUMBER OF SEQ ID NOS: 25
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 12
; LENGTH: 45
; TYPE: DNA
; ORGANISM: HCV
US-10-789-355-12

Query Match
Best Local Similarity 100.0%; Score 15; DB 1; Length 45;
Matches 15; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GCCAGCCCCCGATTG 15
Db 31 GCCAGCCCCCGATTG 45
```

```

; CURRENT FILING DATE: 2004-02-27
; PRIOR APPLICATION NUMBER: US/10/029,907
; PRIOR FILING DATE: 2001-12-21
; PRIOR APPLICATION NUMBER: 60/257,857
; NUMBER OF SEQ ID NOS: 25
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 9
; LENGTH: 63
; TYPE: DNA
; ORGANISM: HCV
US-10-789-355-9

Query Match
Best Local Similarity 0.2%; Score 14.3; DB 1; Length 63;
Matches 32; Conservative 0; Mismatches 12; Indels 1; Gaps 1;

QY 369 AAACCAAAGGCGCGCCATGAT-TGAACAGATGGATTGCACGC 412
Db 2 AATTCCAGATGGCGCGCCAGATGTTAACAGATCCATGGCACAC 46

RESULT 32
US-10-789-355-21
; Sequence 21, Application US/10789355
; GENERAL INFORMATION:
; APPLICANT: BOEHRINGER INGELHEIM (CANADA) LTD.
; TITLE OF INVENTION: SELF REPLICATING RNA MOLECULE FROM
; FILE REFERENCE: 13/083
; CURRENT APPLICATION NUMBER: US/10/789,355
; PRIOR FILING DATE: 2004-02-27
; PRIOR APPLICATION NUMBER: US/10/029,907
; PRIOR FILING DATE: 2001-12-21
; PRIOR APPLICATION NUMBER: 60/257,857
; NUMBER OF SEQ ID NOS: 25
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 21
; LENGTH: 27
; TYPE: DNA
; ORGANISM: HCV
US-10-789-355-21

Query Match
Best Local Similarity 0.2%; Score 14; DB 1; Length 27;
Matches 17; Conservative 0; Mismatches 5; Indels 0; Gaps 0;

QY 582 CGGCTATCGTGGCTGGCCACGA 603
Db 5 CGCCCGTCGTGGCCACGCA 26

RESULT 33
US-10-789-355-9/c
; Sequence 9, Application US/10789355
; GENERAL INFORMATION:
; APPLICANT: BOEHRINGER INGELHEIM (CANADA) LTD.
; TITLE OF INVENTION: SELF REPLICATING RNA MOLECULE FROM
; FILE REFERENCE: 13/083
; CURRENT APPLICATION NUMBER: US/10/789,355
; CURRENT FILING DATE: 2004-02-27
; PRIOR APPLICATION NUMBER: US/10/029,907
; PRIOR FILING DATE: 2001-12-21
; PRIOR APPLICATION NUMBER: 60/257,857
; NUMBER OF SEQ ID NOS: 25
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 9
; LENGTH: 63
; TYPE: DNA
; ORGANISM: HCV
US-10-789-355-9/c

; Sequence 16, Application US/10789355
; GENERAL INFORMATION:
; APPLICANT: BOEHRINGER INGELHEIM (CANADA) LTD.
; TITLE OF INVENTION: SELF REPLICATING RNA MOLECULE FROM
; FILE REFERENCE: 13/083
; CURRENT APPLICATION NUMBER: US/10/789,355
; CURRENT FILING DATE: 2004-02-27
; PRIOR APPLICATION NUMBER: US/10/029,907
; PRIOR FILING DATE: 2001-12-21
; PRIOR APPLICATION NUMBER: 60/257,857
; NUMBER OF SEQ ID NOS: 25
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 16
; LENGTH: 45
; TYPE: DNA
; ORGANISM: HCV
US-10-789-355-16

Query Match
Best Local Similarity 0.2%; Score 15; DB 1; Length 45;
Matches 15; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 GCCAGCCCCCGATTG 15
Db 31 GCCAGCCCCCGATTG 45

RESULT 30
US-10-789-355-20
; Sequence 20, Application US/10789355
; GENERAL INFORMATION:
; APPLICANT: BOEHRINGER INGELHEIM (CANADA) LTD.
; TITLE OF INVENTION: SELF REPLICATING RNA MOLECULE FROM
; FILE REFERENCE: 13/083
; CURRENT APPLICATION NUMBER: US/10/789,355
; CURRENT FILING DATE: 2004-02-27
; PRIOR APPLICATION NUMBER: US/10/029,907
; PRIOR FILING DATE: 2001-12-21
; PRIOR APPLICATION NUMBER: 60/257,857
; NUMBER OF SEQ ID NOS: 25
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 20
; LENGTH: 45
; TYPE: DNA
; ORGANISM: HCV
US-10-789-355-20

Query Match
Best Local Similarity 0.2%; Score 15; DB 1; Length 45;
Matches 15; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 2 CCAGCCCCCGATTGG 16
Db 31 CCAGCCCCCGATTGG 45

RESULT 31
US-10-789-355-9
; Sequence 9, Application US/10789355
; GENERAL INFORMATION:
; APPLICANT: BOEHRINGER INGELHEIM (CANADA) LTD.
; TITLE OF INVENTION: SELF REPLICATING RNA MOLECULE FROM
; FILE REFERENCE: 13/083
; CURRENT APPLICATION NUMBER: US/10/789,355
```

```
US-10-789-355-9
Query Match          0.2%; Score 13.8; DB 1; Length 63;
Best Local Similarity 72.0%; Pred. No. 7.1e+02;
Matches 18; Conservative 0; Mismatches 7; Indels 0; Gaps 0;

Qy 4020 CGTCTGCCAGGACCATCTGGAGTTC 4044
      ||||| ||||| ||||| |||||
Db 25 CATCTGGCGCGCCATCTGGGAATTC 1

RESULT 34
US-10-789-355-13
; Sequence 13, Application US/10789355
; GENERAL INFORMATION:
; APPLICANT: BOEHRINGER INGELHEIM (CANADA) LTD.
; TITLE OF INVENTION: SELF REPLICATING RNA MOLECULE FROM
; FILE REFERENCE: 13/083
; CURRENT APPLICATION NUMBER: US/10789,355
; PRIOR FILING DATE: 2004-02-27
; PRIOR FILING DATE: 2001-12-21
; PRIOR APPLICATION NUMBER: 60/257,857
; PRIOR FILING DATE: 2000-12-22
; NUMBER OF SEQ ID NOS: 25
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 13
; LENGTH: 45
; TYPE: DNA
; ORGANISM: HCV
US-10-789-355-13

Query Match          0.1%; Score 12.8; DB 1; Length 45;
Best Local Similarity 70.8%; Pred. No. 9.9e+02;
Matches 17; Conservative 0; Mismatches 7; Indels 0; Gaps 0;

Qy 8453 CCTTTTCTTTCTTTCTTTT 8476
      ||||| ||||| ||||| |||||
Db 7 CCCTTGGTTTCTTTGAGGTTT 30

RESULT 35
US-10-789-355-15
; Sequence 15, Application US/10789355
; GENERAL INFORMATION:
; APPLICANT: BOEHRINGER INGELHEIM (CANADA) LTD.
; TITLE OF INVENTION: SELF REPLICATING RNA MOLECULE FROM
; FILE REFERENCE: 13/083
; CURRENT APPLICATION NUMBER: US/10789,355
; PRIOR FILING DATE: 2004-02-27
; PRIOR FILING DATE: 2001-12-21
; PRIOR APPLICATION NUMBER: 60/257,857
; PRIOR FILING DATE: 2000-12-22
; NUMBER OF SEQ ID NOS: 25
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 15
; LENGTH: 39
; TYPE: DNA
; ORGANISM: HCV
US-10-789-355-15

Query Match          0.1%; Score 12.6; DB 1; Length 39;
Best Local Similarity 66.7%; Pred. No. 1.1e+03;
Matches 18; Conservative 0; Mismatches 9; Indels 0; Gaps 0;

Qy 4545 CGCGCAACATTCAAACAGAGGCAAT 4571
      ||||| ||||| ||||| |||||
Db 12 CTCAGAAGAACTCGTCAAGAGGCGAT 38

US-10-789-355-11
; Sequence 11, Application US/10789355
; GENERAL INFORMATION:
; APPLICANT: BOEHRINGER INGELHEIM (CANADA) LTD.
; TITLE OF INVENTION: SELF REPLICATING RNA MOLECULE FROM
; FILE REFERENCE: 13/083
; CURRENT APPLICATION NUMBER: US/10789,355
; PRIOR FILING DATE: 2004-02-27
; PRIOR FILING DATE: 2001-12-21
; PRIOR APPLICATION NUMBER: 60/257,857
; PRIOR FILING DATE: 2000-12-22
; NUMBER OF SEQ ID NOS: 25
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 11
; LENGTH: 30
; TYPE: DNA
; ORGANISM: HCV
US-10-789-355-11

Query Match          0.1%; Score 12.2; DB 1; Length 30;
Best Local Similarity 68.0%; Pred. No. 1.4e+03;
Matches 17; Conservative 0; Mismatches 8; Indels 0; Gaps 0;

Qy 8023 CGACTCCATGGCCTTAGCGCATTTT 8047
      ||||| ||||| ||||| |||||
Db 3 CGTACCCATGGTATTATCGTGT 27

RESULT 37
US-10-789-355-14/c
; Sequence 14, Application US/10789355
; GENERAL INFORMATION:
; APPLICANT: BOEHRINGER INGELHEIM (CANADA) LTD.
; TITLE OF INVENTION: SELF REPLICATING RNA MOLECULE FROM
; FILE REFERENCE: 13/083
; CURRENT APPLICATION NUMBER: US/10789,355
; PRIOR FILING DATE: 2004-02-27
; PRIOR APPLICATION NUMBER: 60/257,857
; PRIOR FILING DATE: 2001-12-21
; PRIOR FILING DATE: 2000-12-22
; NUMBER OF SEQ ID NOS: 25
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 14
; LENGTH: 36
; TYPE: DNA
; ORGANISM: HCV
US-10-789-355-14

Query Match          0.1%; Score 12.2; DB 1; Length 36;
Best Local Similarity 60.6%; Pred. No. 1.2e+03;
Matches 20; Conservative 0; Mismatches 13; Indels 0; Gaps 0;

Qy 7849 TCTTGGCTAGGCAACATCATGTATGCGCCC 7881
      ||||| ||||| ||||| |||||
Db 36 TGGTGCAATCCATCTTTGTTCAATCATGCGCCC 4

RESULT 38
US-10-789-355-20/c
; Sequence 20, Application US/10789355
; GENERAL INFORMATION:
; APPLICANT: BOEHRINGER INGELHEIM (CANADA) LTD.
; TITLE OF INVENTION: SELF REPLICATING RNA MOLECULE FROM
; FILE REFERENCE: 13/083
; CURRENT APPLICATION NUMBER: US/10789,355
; PRIOR FILING DATE: 2004-02-27
```

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; PRIOR FILING DATE: 2001-12-21
; PRIOR APPLICATION NUMBER: 60/257,857
; PRIOR FILING DATE: 2000-12-22
; NUMBER OF SEQ ID NOS: 25
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 20
; LENGTH: 45
; TYPE: DNA
; ORGANISM: HCV
US-10-789-355-20

Query Match      0.1%; Score 12; DB 1; Length 45;
Best Local Similarity 54.5%; Pred. No. 1.1e+03;
Matches 24; Conservative 0; Mismatches 20; Indels 0; Gaps 0;

QY 4597 CAACGGAGGCTCTGCTCCCGTGGTGGATCCAAAGTGGCGGAC 4640
      ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db 44 CAATCGGGGCTGTTATAGTAGTCTGATTAGAAATTCGTCAC 1

RESULT 39
US-10-789-355-23
; Sequence 23, Application US/10789355
; GENERAL INFORMATION:
; APPLICANT: BOEHRINGER INGELHEIM (CANADA) LTD.
; TITLE OF INVENTION: SELF REPLICATING RNA MOLECULE FROM
; TITLE OF INVENTION: HEPATITIS C VIRUS
; FILE REFERENCE: 13/083
; CURRENT APPLICATION NUMBER: US/10/789,355
; CURRENT FILING DATE: 2004-02-27
; PRIOR APPLICATION NUMBER: US/10/029,907
; PRIOR FILING DATE: 2001-12-21
; PRIOR APPLICATION NUMBER: 60/257,857
; PRIOR FILING DATE: 2000-12-22
; NUMBER OF SEQ ID NOS: 25
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 23
; LENGTH: 27
; TYPE: DNA
; ORGANISM: HCV
US-10-789-355-23

Query Match      0.1%; Score 11.6; DB 1; Length 27;
Best Local Similarity 65.4%; Pred. No. 1.6e+03;
Matches 17; Conservative 0; Mismatches 9; Indels 0; Gaps 0;

QY 5105 GGGCTGTGCAAGTGAACCGGCTG 5130
      ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db 1 GAGTTGCTCAGTGATGATGGGCGAG 26

RESULT 40
US-10-789-355-19/c
; Sequence 19, Application US/10789355
; GENERAL INFORMATION:
; APPLICANT: BOEHRINGER INGELHEIM (CANADA) LTD.
; TITLE OF INVENTION: SELF REPLICATING RNA MOLECULE FROM
; TITLE OF INVENTION: HEPATITIS C VIRUS
; FILE REFERENCE: 13/083
; CURRENT APPLICATION NUMBER: US/10/789,355
; CURRENT FILING DATE: 2004-02-27
; PRIOR APPLICATION NUMBER: US/10/029,907
; PRIOR FILING DATE: 2001-12-21
; PRIOR APPLICATION NUMBER: 60/257,857
; PRIOR FILING DATE: 2000-12-22
; NUMBER OF SEQ ID NOS: 25
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 19
; LENGTH: 26
; TYPE: DNA
; ORGANISM: HCV
; FEATURE:
; OTHER INFORMATION: Label with FAM: fluorescence reporter dye

; PRIOR FILING DATE: 2001-12-21
; PRIOR APPLICATION NUMBER: 60/257,857
; PRIOR FILING DATE: 2000-12-22
; NUMBER OF SEQ ID NOS: 25
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 20
; LENGTH: 45
; TYPE: DNA
; ORGANISM: HCV
US-10-789-355-19

Query Match      0.1%; Score 11.4; DB 1; Length 26;
Best Local Similarity 92.3%; Pred. No. 1.6e+03;
Matches 12; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 3026 CCGTACCGCAGAC 3038
      ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db 15 CCGTTCGCAGAC 3

OTHER INFORMATION: Label with TAMRA: Quencher dye
US-10-789-355-19

Query Match      0.1%; Score 11.2; DB 1; Length 33;
Best Local Similarity 66.7%; Pred. No. 1.4e+03;
Matches 16; Conservative 0; Mismatches 8; Indels 0; Gaps 0;

QY 827 GATGAAGCCGCTCTTGTGATCA 850
      ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db 33 GAGGGAACCGTTGTGCTGTTA 10

OTHER INFORMATION: Label with TAMRA: Quencher dye
US-10-789-355-19
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```
RESULT 43
US-10-789-355-18
; Sequence 18, Application US/10789355
; GENERAL INFORMATION:
; APPLICANT: BOEHRINGER INGELHEIM (CANADA) LTD.
; TITLE OF INVENTION: SELF REPLICATING RNA MOLECULE FROM
; FILE REFERENCE: 13/083
; CURRENT APPLICATION NUMBER: US/10/789,355
; CURRENT FILING DATE: 2004-02-27
; PRIOR APPLICATION NUMBER: US/10/029,907
; PRIOR FILING DATE: 2001-12-21
; PRIOR APPLICATION NUMBER: 60/257,857
; PRIOR FILING DATE: 2000-12-22
; NUMBER OF SEQ ID NOS: 25
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 18
; LENGTH: 30
; TYPE: DNA
; ORGANISM: HCV
US-10-789-355-18

Query Match      0.1%; Score 10.8; DB 1; Length 30;
Best Local Similarity 60.0%; Pred. No. 1.6e+03;
Matches 18; Conservative 0; Mismatches 12; Indels 0; Gaps 0;

QY 2619 TCATGTCGCCGCTCAAGACCCCTGCGG 2648
DB 1 TCCCGGGGCACTCGCAAGCACCTATCAGG 30

RESULT 44
US-10-789-355-12/c
; Sequence 12, Application US/10789355
; GENERAL INFORMATION:
; APPLICANT: BOEHRINGER INGELHEIM (CANADA) LTD.
; TITLE OF INVENTION: SELF REPLICATING RNA MOLECULE FROM
; FILE REFERENCE: 13/083
; CURRENT APPLICATION NUMBER: US/10/789,355
; CURRENT FILING DATE: 2004-02-27
; PRIOR APPLICATION NUMBER: US/10/029,907
; PRIOR FILING DATE: 2001-12-21
; PRIOR APPLICATION NUMBER: 60/257,857
; PRIOR FILING DATE: 2000-12-22
; NUMBER OF SEQ ID NOS: 25
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 12
; LENGTH: 45
; TYPE: DNA
; ORGANISM: HCV
US-10-789-355-12

Query Match      0.1%; Score 10.6; DB 1; Length 45;
Best Local Similarity 64.8%; Pred. No. 1.2e+03;
Matches 16; Conservative 0; Mismatches 9; Indels 0; Gaps 0;

QY 5060 TCGTGTGGCGAGCGATCTGCGTCG 5084
DB 42 TCGGGGGCTGGCCTATAGTGAGTCG 18

RESULT 45
US-10-789-355-16/c
; Sequence 16, Application US/10789355
; GENERAL INFORMATION:
; APPLICANT: BOEHRINGER INGELHEIM (CANADA) LTD.
; TITLE OF INVENTION: SELF REPLICATING RNA MOLECULE FROM
; FILE REFERENCE: 13/083
; CURRENT APPLICATION NUMBER: US/10/789,355
; CURRENT FILING DATE: 2004-02-27
```

```
; PRIOR APPLICATION NUMBER: US/10/029,907
; PRIOR FILING DATE: 2001-12-21
; PRIOR APPLICATION NUMBER: 60/257,857
; PRIOR FILING DATE: 2000-12-22
; NUMBER OF SEQ ID NOS: 25
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 16
; LENGTH: 45
; TYPE: DNA
; ORGANISM: HCV
US-10-789-355-16

Query Match      0.1%; Score 10.6; DB 1; Length 45;
Best Local Similarity 64.0%; Pred. No. 1.2e+03;
Matches 16; Conservative 0; Mismatches 9; Indels 0; Gaps 0;

QY 5060 TCGTGTGGCGAGCGATCTGCGTCG 5084
DB 42 TCGGGGGCTGGCCTATAGTGAGTCG 18

RESULT 46
US-10-789-355-22/c
; Sequence 22, Application US/10789355
; GENERAL INFORMATION:
; APPLICANT: BOEHRINGER INGELHEIM (CANADA) LTD.
; TITLE OF INVENTION: SELF REPLICATING RNA MOLECULE FROM
; FILE REFERENCE: 13/083
; CURRENT APPLICATION NUMBER: US/10/789,355
; CURRENT FILING DATE: 2004-02-27
; PRIOR APPLICATION NUMBER: US/10/029,907
; PRIOR FILING DATE: 2001-12-21
; PRIOR APPLICATION NUMBER: 60/257,857
; PRIOR FILING DATE: 2000-12-22
; NUMBER OF SEQ ID NOS: 25
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 22
; LENGTH: 23
; TYPE: DNA
; ORGANISM: HCV
US-10-789-355-22

Query Match      0.1%; Score 10.2; DB 1; Length 23;
Best Local Similarity 65.2%; Pred. No. 2e+03;
Matches 15; Conservative 0; Mismatches 8; Indels 0; Gaps 0;

QY 6797 GACTGCAGGTCTTGGACGACCAC 6819
DB 23 GTCTCATGTGACGAGAGACGAC 1

RESULT 47
US-10-789-355-8
; Sequence 8, Application US/10789355
; GENERAL INFORMATION:
; APPLICANT: BOEHRINGER INGELHEIM (CANADA) LTD.
; TITLE OF INVENTION: SELF REPLICATING RNA MOLECULE FROM
; FILE REFERENCE: 13/083
; CURRENT APPLICATION NUMBER: US/10/789,355
; CURRENT FILING DATE: 2004-02-27
; PRIOR APPLICATION NUMBER: US/10/029,907
; PRIOR FILING DATE: 2001-12-21
; PRIOR APPLICATION NUMBER: 60/257,857
; PRIOR FILING DATE: 2000-12-22
; NUMBER OF SEQ ID NOS: 25
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 8
; LENGTH: 6
; TYPE: DNA
; ORGANISM: HCV
US-10-789-355-8
```

Query Match 0.1%; Score 6; DB 1; Length 6;
 Best Local Similarity 100.0%; Pred. No. 1.2e+04;
 Matches 6; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 4765 ACCAGC 4770
 Db 1 ACCAGC 6

RESULT 48
 US-10-789-355-8/c
 ; Sequence 8, Application US/10789355
 ; GENERAL INFORMATION:
 ; APPLICANT: BOEHRINGER INGELHEIM (CANADA) LTD.
 ; TITLE OF INVENTION: SELF REPLICATING RNA MOLECULE FROM
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 ; SEQ ID NO 8
 ; LENGTH: 6
 ; TYPE: DNA
 ; ORGANISM: HCV
 US-10-789-355-8

Query Match 0.1%; Score 6; DB 1; Length 6;
 Best Local Similarity 100.0%; Pred. No. 1.2e+04;
 Matches 6; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 2083 GCTGGT 2088
 Db 6 GCTGGT 1

Search completed: January 25, 2007, 12:27:36
 Job time : 343 secs